

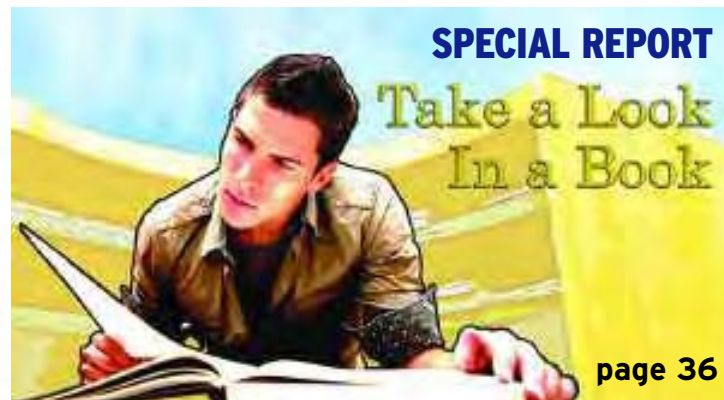
# SD Times

SOFTWARE DEVELOPMENT

The Industry Newspaper for Software Development Managers

SEPTEMBER 1, 2007 • ISSUE NO. 181

www.sdtimes.com • \$7.95



## Negative View of Security Standing in Way of SaaS

BY JENNIFER DEJONG

Thanks largely to the success of Salesforce.com, software as a service is a widely accepted way to deliver business applications. But despite longstanding pockets of adoption, SaaS has not completely caught on in the enterprise development tools arena.

Analysts and toolmakers said there is no reason why entire suites of development tools cannot be delivered on a service basis. The obstacles—security concerns being chief among them—are not technical. The real impediment, they said, is a widespread perception that the SaaS model poses a greater risk for coding, testing and other life-cycle development tools than it does for business software, such as the customer relationship management offering sold by Salesforce.com. “Some people have an almost allergic reaction to hosting source code outside the firewall,” said Forrester analyst Carey Schwaber. “But the resistance is more of an ideological thing than a technical thing.”

IBM Rational program manager Ashok Reddy noted a widely held belief exists that committing customer data to a centralized server controlled by a third party is fine, but doing the same thing with source code is another story. “Source code is intellectual property, and it is perceived as more strategic to the company [than customer data],” he said.

HP vice president of managed software solutions Marc Olesen said the challenges of delivering software as a service are “not unique to development tools.” Security is the key issue cited by development and QA managers considering HP’s service-based offerings for load testing and functional testing; the company, by virtue of its 2006 acquisition of Mercury, can be said to have provided these since

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## Microsoft Nurtures Linux Silverlight Port

Open source foe contributing technical guidance

BY DAVID WORTHINGTON

It appears as if the software giant will make good on a pledge: When Microsoft chief software architect Ray Ozzie unveiled Silverlight on April 30, he vowed that it would be a cross-platform technology.

SD Times has learned that some of Microsoft’s top developers have provided technical guidance for a Linux implementation of Silverlight, its slimmed-down version of the .NET Common Language Runtime designed to run inside Web browsers. Microsoft is already supporting several platforms with Silverlight,



*The ‘right people’ inside and outside of Microsoft have answered the Moonlight team’s requests for resources.*

—Miguel de Icaza, vice president of developer platforms for Novell

including Internet Explorer, Mozilla and Safari running on Mac OS X and Windows.

Miguel de Icaza, vice president of developer platforms for Novell and leader of Novell’s

Mono project, explained that Microsoft offered up its opinion and guidance on how to build a Mono-based implementation of Silverlight 1.1 that runs on Lin-

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## SCO’s Linux Case Nears End

Federal judge hands Novell a win; SCO lawsuits in jeopardy



The industry is willing to defend the platform, says Linux Foundation CEO Jim Zemlin.

BY ALEX HANDY

On Aug. 10, a four-year journey into the heart of Linux began to come to an end. On that day, U.S. District Court Judge Dale Kimball issued summary judgment that Novell had retained the copyright to Unix after a 1995 agreement with The Santa Cruz Operation. This essentially voids claims in other cases by The SCO Group (SCO)—the company that bought The Santa Cruz Operation’s Unix assets in 2001—that Linux included its Unix code and thus infringed upon its copyright. If the ruling is

appealed and upheld, SCO’s ability to continue its suits against AutoZone, IBM and Red Hat may be eliminated.

While SCO still has other Linux-related lawsuits pending, Jim Zemlin, executive director of the Linux Foundation, said that the ruling proves how safe Linux really is, legally speaking. “This case is now no longer relevant and means nothing to someone who’s using Linux,” said Zemlin. “The broader understanding that users of the Linux platform should [have] is that, not only is

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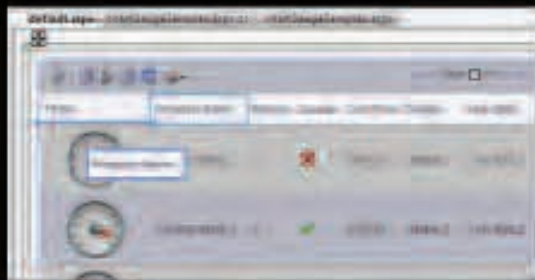
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# Enable Your Web 2.0 Enterprise

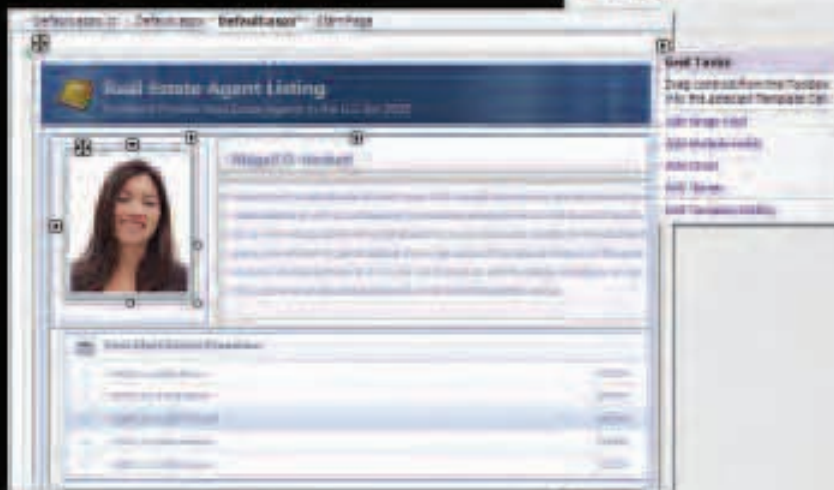


▲ Drag & drop grid elements within the Visual Studio 2005 design surface.

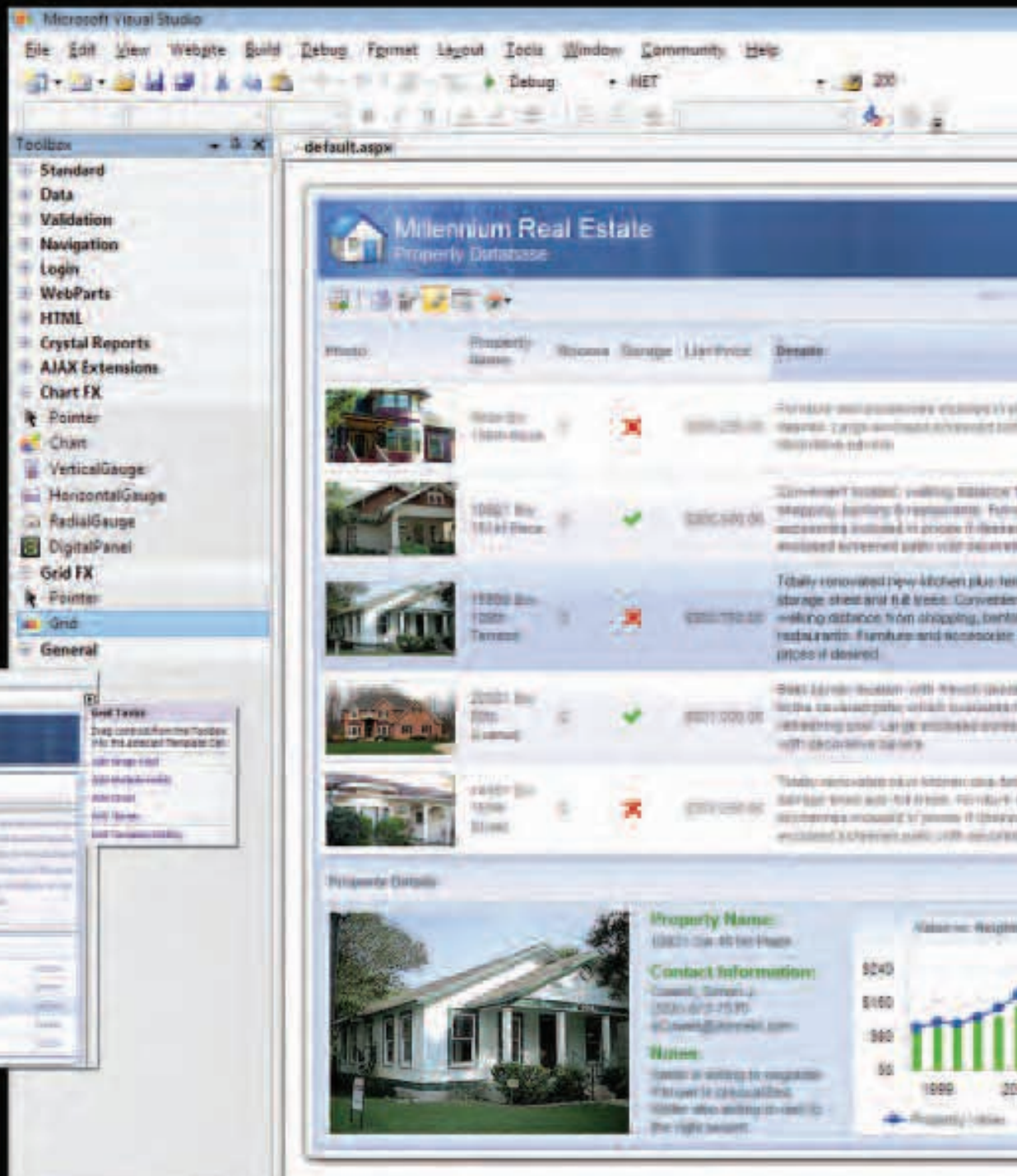


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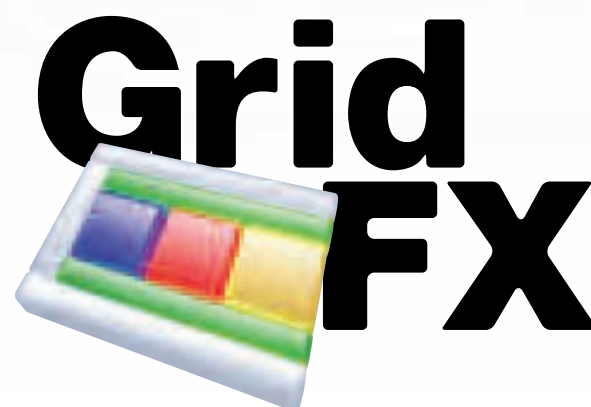
▲ Card views and master details

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FIG. 9.—CAPTAIN BLINDSIDED AS FOG SETTLES OVER DEVELOPMENT PROCESS.  
Nothing runs application development aground faster than a lack of visibility.

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# Sun Is Bringing Debian to Solaris

Project Indiana seeks to add Linux-like features to Sun's flavor of Unix

BY ALEX HANDY

It may be second nature to dolphins, but breathing air presents a major problem for sharks. Similarly, the Linux enthusiast, in its natural habitat, is not used to "Start" menus, DTrace or iTunes. Although Apple and Microsoft aren't terribly interested in catering to Linux users, Sun Microsystems has been making noises over the past few years that indicate it covets the broad user base of Linux. As such, the company is laying out a road map for Solaris that it hopes will make Linux users feel more at home on its version of Unix.

Earlier this spring, Sun announced that it had hired Ian Murdock, the creator of the Debian distribution of Linux, naming him the company's chief operating system platform strategist. Since then, Murdock has worked quietly on Project Indiana, an effort to remake

Solaris in Linux's image.

Murdock was at the Linux-World Conference & Expo in San Francisco on Aug. 7 to talk up his work, and to pull back the curtains on Indiana. The biweekly builds of Solaris Community Edition have begun to show the results: Starting Aug. 13, Solaris' installer will display a fresh look, with further back-end changes to follow.

"The installer is actually a fairly longstanding project in [Sun's] engineering organization. Part of the Indiana project is to take that [new] front end and replace the back end. It's about turning the Solaris installation into a live media environment, where you can test it out to find out if the hardware works," said Murdock.

While the new installer is being integrated into the publicly available Solaris builds, the back-end system of which Mur-



Debian creator Ian Murdock has been working on Project Indiana since he joined Sun in the spring.

dock speaks is still in development. That will amount to reworking Debian's apt-get application installer into a dynamic software acquisition and installation system for Solaris that reflects real-world requirements. Today, Debian users can down-

load and install software from source code or as precompiled binaries with a single command-line entry. For a Solaris apt-get, said Murdock, he'd like to fix some of the problems that still exist in the original.

"It's been 10 years since apt-get was thought up," said Murdock. "A lot of things have changed in the packaging world since then. People use and abuse the package system in cruel ways. If you think about how people integrate customizations, it's a version control system of sorts. How do you branch off and then pull down the things that you don't change? We're thinking about the package system as a change management facility."

While Murdock concentrates on "Debian-izing" Solaris, Sun's engineers are working on the nitty-gritty of the operating system in a quest to improve performance. One example is Project

Crossbow, which is attempting to completely redesign the Solaris network stack. Additionally, the packaging system sought by Murdock requires a total redesign of how Solaris is packaged for distribution.

As for the OpenSolaris community, Murdock believes that the key to succeeding with two Solaris tracks is to strike a balance between community-driven initiatives and dictatorial rule. Specifically, "How do you maintain some centralization, but open up that control so it's not simply one party [in charge]?" Murdock then said that Sun's plan for controlling Solaris will reflect a philosophy of letting contributions determine influence: "If you're willing to put developers into the community, you should have an equivalent amount of control over how that platform is evolving." ■

# XenSource and Citrix Virtually One

Acquisition gives Citrix desktop suite new virtualization capabilities

BY ALEX HANDY

Author Douglas Hofstadter would be proud of the recursive possibilities that became available to XenSource and Citrix Systems on Aug. 15, when the latter purchased the former for US\$500 million.

XenSource, a Palo Alto, Calif.-based company focused on commercializing the open source Xen virtualization hypervisor, should be absorbed almost intact into the Citrix organization by the end of this year. With Xen already integrated into a number of Linux and Unix distributions, Citrix's acquisition instantly makes it a heavyweight player in the virtualization market.

Citrix produces software that allows desktop installations of operating systems to be managed and distributed from a

central server, minimizing the amount of maintenance and variation caused by end users.

XenSource CEO Peter Levine will become general manager of the new virtualization and management division at Citrix.

John Humphreys, vice president of enterprise virtualization at IDC, said that the time may be right for a group hug between XenSource, Citrix and Microsoft. XenSource introduced on Aug. 13 an update to its enterprise product that includes live migration, the ability to move virtualized machines across hardware without interrupting the software running inside. "When Microsoft talks about [the Windows Server hypervisor, code-named] Viridian, they were going to take live migration out

of the initial Viridian release. We find that that's a must-have function [in our surveys]. By not having it, I think what you'll find is the Viridian offering will fall a little bit short of what people are expecting," said Humphreys.

## STRUGGLE AHEAD?

But while Humphreys sees Microsoft either playing nice or playing defense, his colleague Stephen Elliot, research manager for system management at IDC, expects Citrix to be in for a struggle, particularly on the desktop. "I've been talking to a lot of financial institutions, and while I think it's definitely an opportunity, I think people are underestimating the pricing power and channel influence of Microsoft," said Elliot. "Keep in mind, this is a space where Microsoft doesn't care about revenue. If they need to give it away, they will, and they can."

Citrix, on the day of the acquisition, was estimated as having more than \$5 billion in market capital, meaning that the acquisition of XenSource consumed roughly 10 percent of Citrix's overall worth. The

VMware initial stock offering that occurred two days before the Citrix acquisition of XenSource was made up of only around a tenth of that company's stock; the remaining 90 percent is still in the hands of parent company EMC. While VMware stock rose almost 70 percent on the day of its IPO—from US\$29 per share at the opening to \$51 per share at the close in a depressed market—Citrix shares were off by 1.5 percent on news of the acquisition.

XenSource vice president of marketing John Bara said the company will embark on a dual strategy. "First, Citrix will heavily invest in expanding the existing XenSource server virtualization product line." He noted that the goal was to go from \$10 million in revenue this year, to \$50 million or more next year, adding that the other part of the game plan called for the company to get into desktop virtualization, "to enable a virtualization client experience through existing Citrix strength on the desktop."

IDC's Humphreys sees potential for growth in the virtu-

## XEN'S SOURCE

Ian Pratt and Simon Crosby founded XenSource in 2004. Pratt originally created Xen as part of a research project at Cambridge University. Recently, the Xen hypervisor was made 64-bit clean, thanks to the work of Pratt and the numerous contributors to the project. XenSource vice president of marketing John Bara said that XenSource employs 50 developers, many of whom contribute to the open source project. Overall, he estimated, there are 300 Xen developers contributing to the project, worldwide.

The Xen hypervisor is included in numerous Linux distributions, including Novell's SUSE Linux platform.

—Alex Handy

alization world, and doesn't think the VMware IPO was the only driver behind the XenSource acquisition. "It was more [about] the tremendous momentum and focus on virtualization right now, and who was positioned well." He noted that virtualization is a "top five CIO agenda item, and we've only begun to scratch the surface. It's not just a tool for server consolidation anymore. [Virtualization] is not a one-trick pony." ■

## OPEN SOURCE GETTING PRICEY

Company	Buyer	Price*	Year
XenSource	Citrix Systems	\$500 million	2007
JBoss	Red Hat	\$350 million	2006
Check Point Software	Sourcefire	\$225 million	2005
SuSE GmbH	Novell	\$210 million	2003

Note: Many acquisitions involving privately held companies do not disclose the purchase amount.  
\*In US dollars

**NEWS BRIEFS****COMPANIES**

Intellectual property law firm **Brinks Hofer Gilson & Lione** has announced that the U.S. Patent and Trademark Office has granted its request for re-examination of two patents covering software used by futures traders. The patents are owned by **Trading Technologies International** and deal with a user interface for entering trade orders. The patents describe a display with a static price ladder, and implementations of a specific order entry methodology to reduce the time it takes to enter a trade order electronically.

**NEW PRODUCTS**

Serena Software has released **Agile in the Enterprise**, a new program that helps enterprise IT organizations adopt agile software development practices. Agile in the Enterprise includes advisory services, training and coaching services, and two new product offerings: Serena Agile Accelerator for the TeamTrack business process manager, and the Mariner project and portfolio manager.

**UPGRADES**

NCR's Teradata division has announced the availability of **Warehouse Miner 5.1**, its analytics tool set based on Predictive Model Markup Language. Warehouse Miner extends the company's enterprise data warehouse to allow the use of data-mining technology from a range of vendors, including Fair Isaac, SAS and SPSS . . . LogicLibrary made **Logidex 5.5 for .NET** generally available in August. Logidex 5.5 is a software development asset (SDA) life-cycle hub that integrates SDA processes within the SOA service life cycle. New features are improved policy management, expanded impact analysis and customizable Smart Controls to address customer specific compliance requirements . . . Ultimus, a Cary, N.C.-based provider of business process management and workflow automation tools, has announced version 8 of its **Ultimus Adaptive BPM Suite**. The newest version of the tool offers Microsoft Office 2007 forms and integration with SharePoint. The tool also has a feature called the Ultimus Human Services Bus, which can couple AJAX with Web services to provide real-time updates to shared documents.

**PEOPLE**

The Linux Foundation in July named Novell executive **Markus Rex** as its new CTO. Rex came into the Linux world by working at SUSE prior to its acquisition by Novell. His duties will include overseeing Linux standards efforts, identifying new technologies relevant to the Linux platform, and finding potential uses for new software in Linux . . . RIA provider Laszlo Systems has announced three management appointments: **George Shahid** as CFO, **Chris Helgeson** as SVP of engineering, and **Reid Thomas** as SVP of worldwide sales and distribution. Most recently, Shahid served as COO of BlueRoads, a SaaS CRM company, while Helgeson was VP of engineering at eBay. Thomas spent the past four years as SVP of worldwide sales with VoIP provider Sylantro Systems . . . OpenView Venture Partners, an expansion stage venture capital fund focused on software, has announced that **Jeff Sutherland** has joined the firm as a senior adviser. Sutherland is the inventor of the Scrum agile development process, which is used for managing software development teams . . . DataJungle, creator of business intelligence front-end applications, has named **Craig Harper** as the company's CTO. Prior to joining DataJungle, Harper co-founded Apisphere, a mobile messaging company, in 2006. He also served as president and CTO of systems integrator and network management provider Lilien Systems, and CTO and member of the founding executive team of Avasta, a provider of ASP infrastructure tools . . . Palo Alto Research Center computational linguist **Lauri Karttunen** was awarded the Lifetime Achievement Award from the Association for Computational Linguistics, the international scientific society for people working on problems involving natural language and computation. Karttunen is known for his contributions to the semantics of discourse referents, presuppositions and questions. ■



*'If you go to a church picnic for free food and get sick, you won't be surprised if you can sue somebody. The expectation is that the church is not going to poison you.'*

—Richard Clayton, professor at Cambridge and the House of Lords committee's technical expert



# Making Software Vendors Pay for Their Negligence

## U.K. House of Lords proposes transferring costs

BY DAVID WORTHINGTON

The Chevrolet Corvair was recalled after consumer advocates claimed that it was unsafe at any speed; there was a clear commercial incentive for General Motors to manufacture safe products. But what incentive does the software industry have to produce secure software? The upper house of the British Parliament may not have much power, but it has the software business in its sights.

The Science and Technology Committee of the House of Lords published a report in August on personal Internet security, which concludes that it is all too easy for vendors to "dump risks" onto consumers through licensing agreements to avoid paying the costs of insecurity.

The report stated that efforts to promote best practices have been hampered by a lack of commercial incentives to make products secure. The committee's solution is to propose transferring the cost of insecurity onto demonstrably negligent hardware and software manufacturers, with the long-term goal of establishing a framework for vendor liability across Europe.

The report makes detailed recommendations about the form of the proposed law. It also details short-term goals such as enacting data breach notification laws, providing guidance to the courts, researching IT security, and suggesting best practices for the software industry.

Graham Titterington, a principal analyst at Ovum specializing in IT security and business continuity, believes that the committee's proposals are

impractical. "The complexity of all of the issues is too great to legislate in a universal fashion. In the event that defects are known and reported and not fixed in a reasonable manner, there are areas where negligence would be appropriate. Automatic liability for all errors is not realistic."

Titterington added that the industry simply does not have the knowledge and technology to produce totally secure software. Indeterminate factors such as whether the consumer has taken steps to mitigate vulnerabilities, the extent to which the software is being used, and the class and value of the software are the gray area of the law.

"This proposal could open a can of worms of litigation," added Ovum senior analyst Bola Rotibi.

The Lords committee's technical expert, Richard Clayton, a professor at the University of Cambridge, believes that the committee members understand that it will take some time to sort out the ramifications—noting that the current penal system evolved over time. But, on balance, they have concluded that permitting software vendors to disclaim liability is not a viable situation going forward, he said.

Clayton noted that courts must decide who is at fault every time a motorcar goes off the road, whether it is the driver, people that design the car or road, or the person that made the tires.

"These are difficult questions, but things we are used to sorting out through litigation," said Clayton. "It is the sort of thing our society can cope with.

Software developers are not used to coping because they can say, 'We disclaim liability.' The upside is [a market incentive to create] much more reliable software that can be trusted. It outweighs the short- and medium-term confusion."

**OPEN SOURCE CONUNDRUM**

Open source software is of particular interest: In a consensus-based community, there may be tremendous confusion about who is responsible for any negligence. Clayton believes that it would be difficult to ascertain who produced it, and wondered whether assigning liability will produce a bias against free software.

Assigning blame will be tricky but not impossible, said Clayton. "If you go to a church picnic for free food and get sick, you won't be surprised if you can sue somebody. The expectation is that the church is not going to poison you."

Clayton quipped that the software industry's license agreements could easily be compared to musical theater, where the small print on tickets does not guarantee that a particular actor will perform. However, he predicted that the end result—after the case law settles down and penal code is established—would be that the software industry is just the same as any other industry.

Ovum's Rotibi agreed that some of the onus has to be on the software vendors, in terms of how they implement the security of applications and networks. She added that the industry could do a lot more than it has done in the past in terms of helping consumer safety and security: "Maybe this is what is needed to shake the industry up." ■



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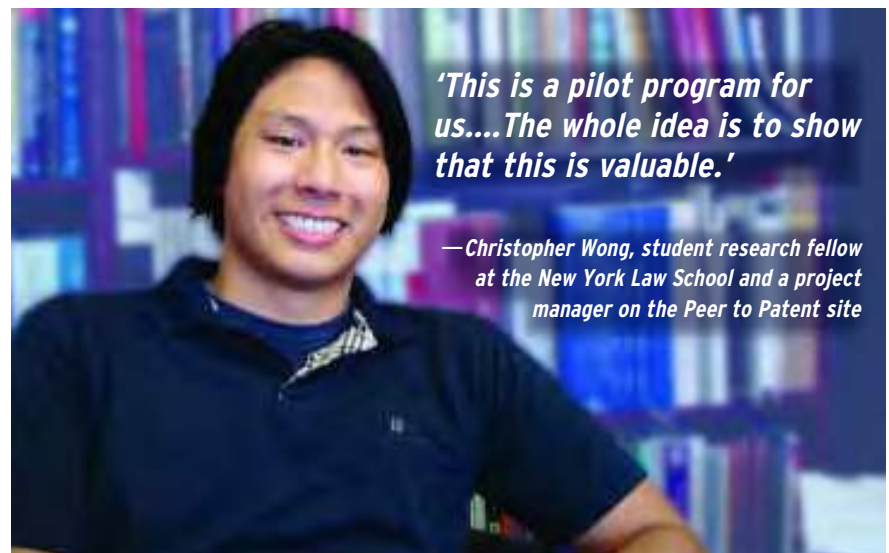
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*'This is a pilot program for us....The whole idea is to show that this is valuable.'*

—Christopher Wong, student research fellow at the New York Law School and a project manager on the Peer to Patent site

# Peer to Patent Project Sees First Submissions

BY ALEX HANDY

For patent seekers, a faster path to approval could prove more rigorous. In mid-June, the Peer to Patent Project finally opened its Web site to submissions. The project, designed by the New York Law School's Institute for Information and Policy with the U.S. Patent and Trademark Office (USPTO), puts pending computer-related patents out in the open so the public can post links to prior art. Other users can then vote on the validity of the prior art during an 18-week comment period, with the most valid entries being passed to the USPTO with the patent.

These prescrutinized patents will then be fast-tracked through the USPTO, skipping the estimated 40-month waiting period for standard patent approval. Christopher Wong, a student research fellow at the New York Law School and a project manager on the Peer to Patent site, said that many companies are happy to have a faster route to patents, even if the process is more stringent.

"When a company has a patent, they're going to sink a significant amount of resources into it," Wong said. Obviously, nobody wants to sink resources into something that could be invalidated in five years. For a company, they don't want to have a bad patent under their belt, because it's actually more of a liability," he added.

## BIG NAME SUPPORT

Some of the biggest names in the patent business have already submitted their wares to the Peer to Patent Project. IBM has submitted a patent application for cryptography. Microsoft is awaiting results on one for digital rights management, and GE has already pushed three patent applications into the process. Wong argued that with support from companies such as these, it will be hard to make a case against the validity of the project's

purpose: GE and IBM are two of the most prolific patenting companies in the world.

Wong added that the contentious nature of software patents makes the Peer to Patent Project even more important in the technology world. He hopes that when the project is complete next year, the USPTO will see a permanent place for the effort in its processes. "This is a pilot program for us. The pilot runs for one year or to 250 [patent] applications, whichever comes first. The whole idea is to show that this is valuable," Wong explained. As of mid-August, the project had garnered its first dozen patents for approval. Those patents are on display for review at dotank.nyls.edu/communitypatent.

Although the Peer to Patent Project should speed up the flow of patent approvals, it is still heavily tied to the USPTO's existing processes. Applicants must first submit their patent to the USPTO itself, with specific mention of the desire for submission to the Peer to Patent Project. Wong said that the project simply replaces the USPTO's internal prior-art searches. Since the USPTO's searches are performed exclusively against internal records, the Peer to Patent process is significantly more thorough and timely. After the 18-week public review ends, the USPTO then evaluates the user-submitted prior art, in a fashion similar to how it would consider a patent after its own prior art searches had been completed. Wong said that the Peer to Patent Project specifically targets prior art, as the largest bottleneck in the approval process.

Wong encouraged developers to submit their patent applications to the USPTO with the goal of having them evaluated on the Peer to Patent Project. The more patents submitted, he said, the easier it will be for the project to prove its worth to the USPTO, and to perhaps become permanent. ■



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# AMD Spins New Threading Instructions

BY ALEX HANDY

AMD in mid-August revealed the specifications for a new processor instruction set aimed at multithreaded programs. This new instruction, which AMD said would eventually

become one of many, is called Light Weight Profiling (LWP). For now, however, LWP is simply a publicly available specification, as AMD seeks input from developers who are looking for multithreading solutions.

Margaret Lewis, director of commercial solutions for AMD, said that LWP would offer developers a new way to see inside of the processor as applications are running. Specifically, said Lewis, AMD is looking

to build hardware extensions for software parallelism. In order to facilitate future instructions, AMD will lay the groundwork by including LWP into future processors.

"LWP is a real-time runtime

facility that will provide feedback to be used by software," said Earl Stahl, vice president of software engineering at AMD. "[Using LWP would allow a] JVM to dynamically optimize aspects of its own function. If you think about garbage collection in a JVM, particularly the way it interacts with hardware," the benefits are obvious, he noted. "If two objects happen to be causing a conflict where it's causing a lot of cache misses, [LWP] can give info and say, 'One of these objects ought to be moved.'"

## LOOKING AHEAD

While LWP is a long way from production CPUs, Lewis and Stahl still had ideas about what the instruction sets that come after LWP may look like. "We think there's an opportunity for several [potential additions], such as hardware support for software transactional memory," Stahl explained. "Others [at AMD] have spoken of high-performance message passing."

Stahl did not give any time frame for the creation of these additional instructions, but he noted that AMD understands that dramatic solutions may be necessary to address the threaded programming issues currently being experienced by developers.

Lewis saw many similarities here to AMD's previous efforts to ease virtualization. "Think about this in terms of AMD virtualization, where [AMD added] specific hardware hooks that helped virtualization software. By enabling virtualization software you're enabling guest environments and applications by helping [them] run more efficiently without demanding everyone rewrite their code to run in a virtual environment. With LWP, we're looking for the same type of opportunities," said Lewis.

For now, developers looking to comment on AMD's plans for LWP can post their ideas at developer.amd.com. Future proposed additions to AMD's processors will likely be evaluated by the public in the same manner used here, said Stahl.

"Not every software developer is going to care about this," Stahl admitted. "This is foundational stuff. I like to think we got it 100 percent right, but we may revise this, based on the feedback we get." ■

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# Linux the First Platform for Oracle's 11g

## Company also releases first Coherence data grid update after purchase of Tangosol

BY P.J. CONNOLLY

Oracle released the latest version of its flagship database platform for Linux in mid-August, but with no indication of when Unix and Windows versions of the 11g database will follow.

Database 11g, which became available for Linux on Aug. 14, offers new developer-oriented features including client-side caching, a new just-in-time (JIT) Java compiler, and native integration with Microsoft Visual Studio 2005. It also includes updates to its binary XML support that the company claims will improve application performance, and the speed of file access and XML processing.

Other new features in Oracle Database 11g focus on data protection and disaster recovery, as well as information life-cycle and storage management. OLAP cubes can now behave as materialized views in an 11g database, allowing developers to use SQL for queries, with the performance advantages of a cube.

At the same time, the company announced four new options for the 11g Enterprise Edition. Oracle Active Data Guard allows the offloading of resource-intensive operations such as backups and queries onto a single physical standby database, and Oracle Advanced Compression can squeeze data into a half or even a third of its uncompressed space, the company claims. Oracle Real Application Testing is designed to reduce the headaches of upgrading software and systems alike, while Oracle Total Recall allows the maintenance of historical archives of changed data, for use in business intelligence and regulatory compliance schemes.

### GRIDDING UP

The Database 11g release came on the heels of the previous day's general availability of Oracle Coherence 3.3, an in-memory data grid and part of the company's Fusion line of middleware. Coherence 3.3 adds Java SE 6 as a supported platform, and was made available to the product's existing customers at the end of May; its creator Tangosol was purchased earlier in the year by Oracle.

In the first release under the Oracle brand, Coherence 3.3 includes enhancements to its

clustering protocol that the company claims reduces thread contention on multicore hardware, and improves network

behavior in the areas of cluster segmentation resolution, flow control and network utilization.

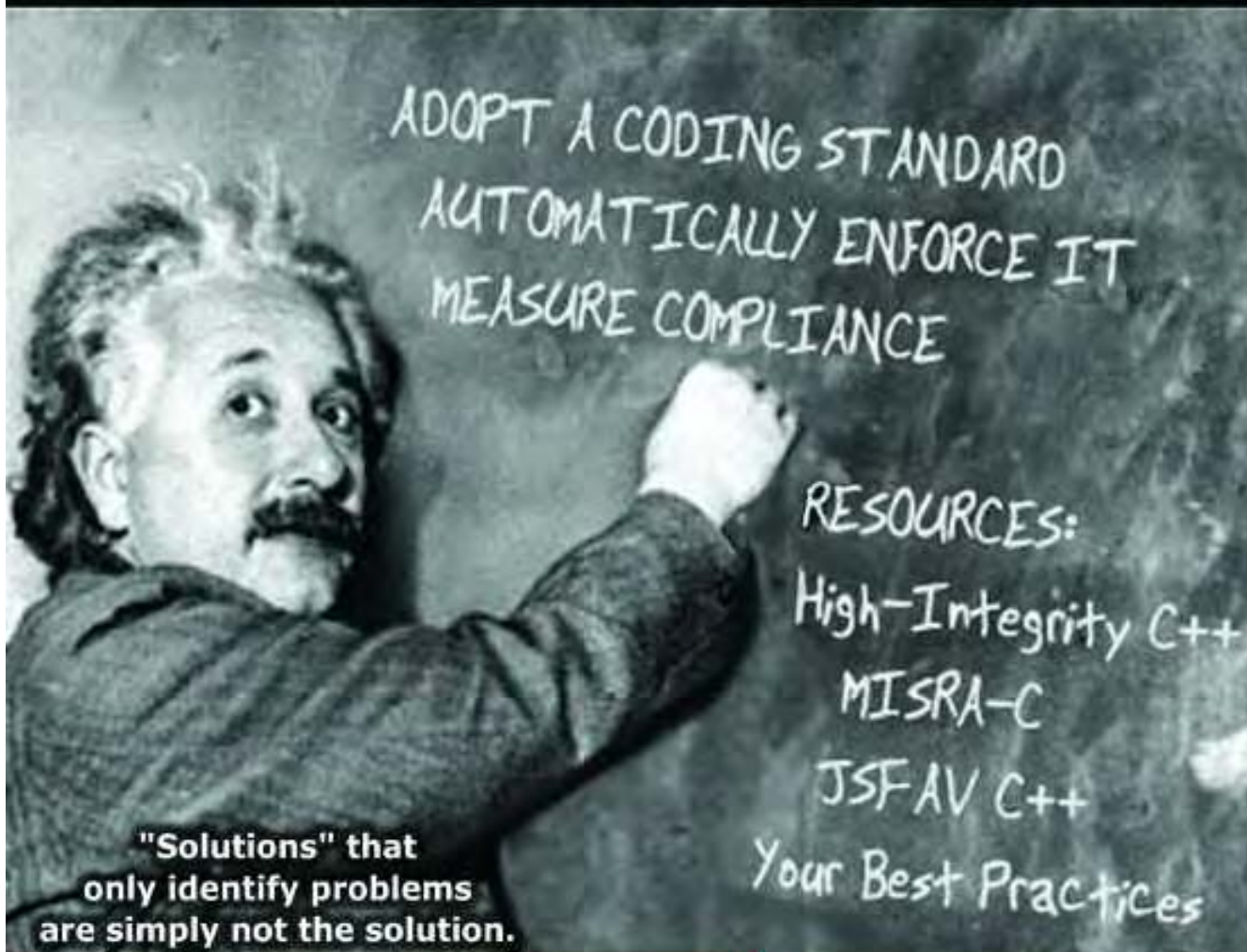
Oracle also released an

updated version of Coherence for the Microsoft .NET Framework, which extends desktop- and server-based .NET applica-

tions and allows them to access a Coherence data grid and reliably cluster an application's state across multiple nodes. ■

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# Sun Releases OpenJDK Community TCK License

BY JEFF FEINMAN

Sun Microsystems has made available the OpenJDK Community Technology Compatibility Kit (JCK) License.

The JCK is a suite of tests,

tools and documentation to determine whether or not an implementation of the Java language and runtime complies with the Java Platform Standard Edition 6 specification. Sun is

licensing the JCK under terms of the GNU General Public License version 2, giving the OpenJDK community its first chance to test for compatibility.

The availability of these

Technology Compatibility Kits for Java has been a source of friction between Sun and the open source community. In late July, SD Times asked Sun to make a copy of the JCK license

available for review, but Sun refused. "The licenses are confidential and we are unable to accommodate your request. All public information is available on each of the JSR pages on the JCP.org site," said Jackie DeCoster, a spokesperson for the Java Community Process Program Management Office.

The Apache Software Foundation has claimed that the TCK license agreement for Java SE 5, and subsequently version 6, contains field-of-use restrictions that limit use of the software tested by the TCK. Mark Reinhold, chief engineer for the Java 2 platform at Sun, said in June that Apache licenses 1.1 and 2 are open source licenses that are not compatible with the GPL.

"There are different views about whether the Apache licenses are compatible with GPL," Reinhold said at the time, noting that Sun's goal was "a complete GPLv2 JDK."

Organizations or individual developers that use the OpenJDK Community TCK License and then successfully pass compatibility testing, will have the option of branding their implementation with Sun's "Java Compatible" trademark and logo. ■



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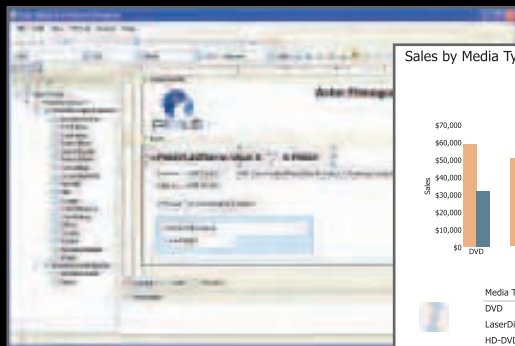
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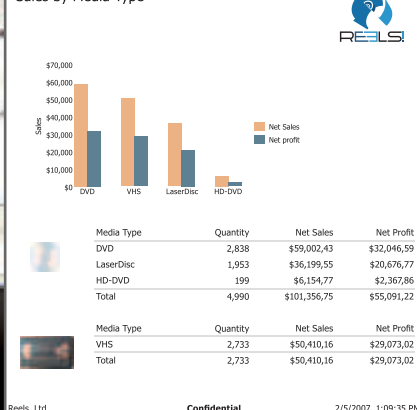
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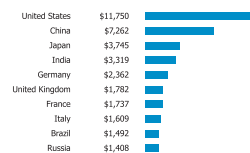
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## VMWARE BRINGS FUSION TO MANAGEMENT

BY P.J. CONNOLLY

VMware announced in early August the general availability of VMware Fusion, an adaptation of its desktop virtualization software designed for Mac OS X on Intel-based Apple computers. The EMC subsidiary claims that Fusion offers superior power management capabilities, and works with more than 60 guest operating systems; machines with a Core2Duo or Xeon processor are necessary to run 64-bit guest operating systems.

VMware Fusion allows the use of Apple's Boot Camp partitions as virtual machines, and up to 8GB of RAM can be allocated to a virtual machine. The company also provides the VMware Converter Starter Edition as a free download, which helps migrate existing physical machines running Windows into virtual machines running under Fusion. ■

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 DATA  
DYNAMICS

# Ruby and Java Make Beautiful Music

BY ALEX HANDY

Developers using Ruby on Rails are finding that Java and JRuby can fill in the gaps of the still-evolving language. With a strict adherence to the model-view-controller principle, and an emphasis on never repeating the same code within an application, Ruby on Rails is tailor-made to confront the hassles of developing for the Web with JavaServer Pages.

But Ruby on Rails is still only 3 years old, and is not yet mature enough to handle all of the complex tasks Java has taken to over the years. Hosting company Joyent has seen its customers build high-performing solutions by combining Java and Ruby.

Jason Hoffman, Joyent's CTO, said that the journey toward a deployable, fast and stable Ruby environment has been a long one. When Joyent was founded in 2004, Ruby on Rails was only just beginning to make its way out into the public eye. At the time, he said, everything was run through Apache's `mod_ruby` module, making some applications slow. As time passed, however, other runtimes emerged for Ruby that opened up possibilities for faster applications.

By the time Zed A. Shaw's Mongrel Web server arrived late last year, Hoffman said that Ruby was truly ready for prime-time enterprise Web application development. With the open source Mongrel pushing between 100 and 400 requests per second, Hoffman explained that corporate Web sites were finally ready to consider Ruby for their mainline applications.

But Mongrel is no longer the top dog when it comes to serving up Ruby requests. Hoffman claimed that his company is now serving more than 1,200 transactions per second with JRuby and Sun Microsystems' Glassfish. But speed is not the only advantage gained by running Ruby applications inside of Sun's open source Java application server, he argued, noting that some of his customers treat Ruby on Rails as another layer and Web framework, on top of Java.

"Even though there are some aspects of JRuby that are slower than Ruby, some aspects are significantly better," Hoffman argued. "Java's better at parsing XML than Ruby is. I see a lot of

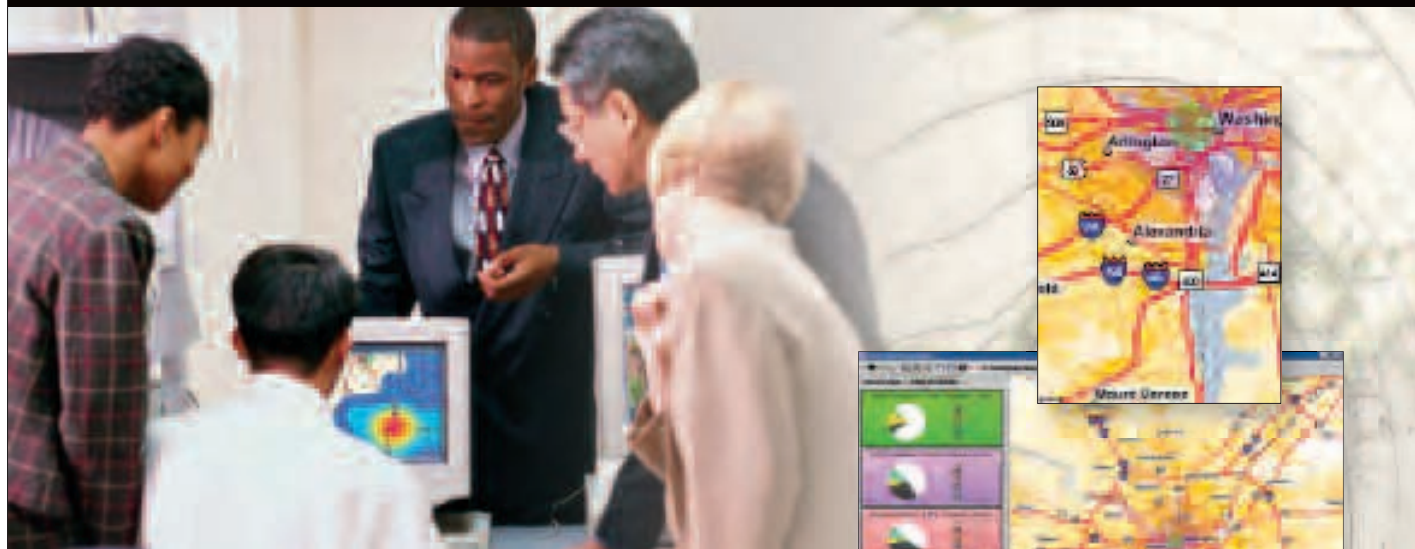
people using it as a solution for more rapid XML work," he explained, pointing out that Ruby's primary shortcomings have been its immaturity and lack of libraries. In Hoffman's

opinion, by allowing access to the vast array of Java libraries and capabilities, JRuby eliminates these shortcomings while sidestepping the commonly cited issue of Java's complexity.

Database connectivity is another area where Hoffman believes Ruby is lacking. When it comes to database connection pooling, or dealing with clustered file systems in Oracle or

other large-scale databases, Hoffman admitted that Ruby is not entirely sure-footed. On the other hand, he said, Java's JDBC is "just about perfect" when it comes to dealing with database checks, so running Ruby-borne database code through JDBC in JRuby makes for an elegant solution. ■

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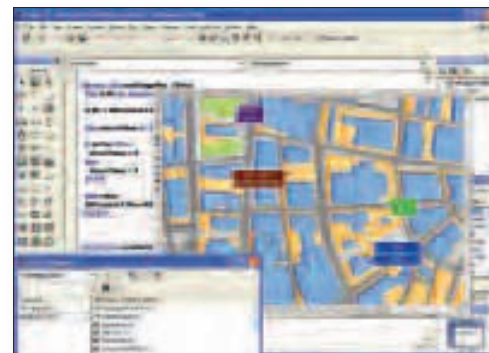
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# Adding Details to an Infinite View

## MB Technologies enhances InfiView with Google Maps integration

BY JEFF FEINMAN

MB Technologies, creator of the Bindows development framework, has updated its tool plat-

form for developing interactive and rich maps and diagrams.

The company is set to release version 1.5 of InfiView

on Sept. 10; the first release of the tool was in March at the AJAXWorld Conference in New York. InfiView is a platform for

creating diagrams including network topologies, airline routes and mapping support.

Version 1.5 of InfiView will

offer graphical grouping integration capabilities with Google Maps. Users can create layers in InfiView to load maps from Google, and then add diagrams with graphics. Yoram Meriaz, CEO of MB Technologies, said that this could be used to take maps from one supplier and put in additional information for users without the limitations of Google Maps.

### LAYERING ON EXISTING DATA

InfiView is built in Bindows and can be used with it. InfiView allows the user to define and select tools by either modifying XML templates or by using the InfiView wizard. Users can create applications or embed diagrams into a mashup. InfiView uses a "layer" concept of mashup creation, in which Web sites or maps can be laid on top of existing data such as maps or schematic diagrams, creating interactive applications.

"I think InfiView is pretty unique. I don't think anyone has created on the AJAX side something that would use AJAX, which means that you can have an infinite view," Meriaz said. "People create diagramming tools, but they're limited to three or four screen sizes...this can have infinite screens showing diagrams."

Yoram Meriaz and his brother Ran established MB Technologies in 2002 in Warner Robins, Ga., with another office in Sweden. The company started off with the creation of the Bindows AJAX framework, which Meriaz called "AJAX before [the term] AJAX was coined."

The Bindows framework is object-oriented, server-agnostic and offers integration capabilities with both Eclipse and IntelliJ's IDEA. The company claims Bindows is built with the performance requirements of large complex applications in mind.

"Bindows, I think today, is by far richer than any of the other frameworks, whether they're commercial or open source," Meriaz said. "The architecture of it, which is similar to many things in Java, is easily understood by object-oriented people. You don't need to know about HTML, but you do have all the power of JavaScript within it." ■

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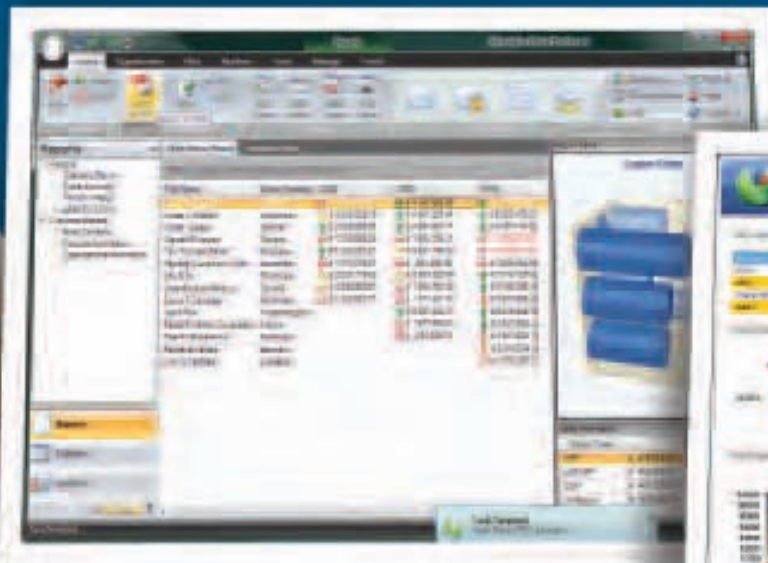
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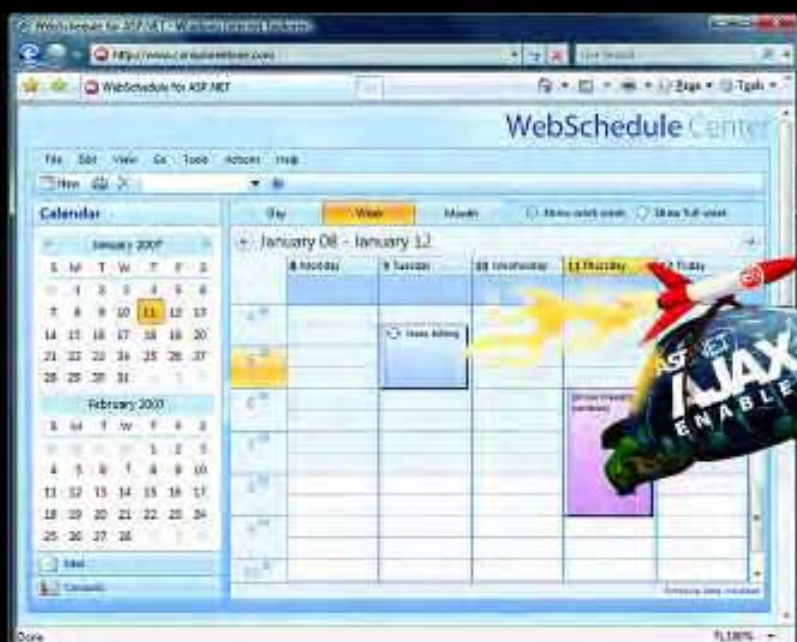
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# OpenSpan Cuts Across More Application Types

BY DAVID WORTHINGTON

Is your idea of application integration cutting and pasting among applications? OpenSpan says that integrating the applications themselves is a better way.

OpenSpan Platform 3.1, the latest version of the company's application integration and process automation platform, became generally available in early August.

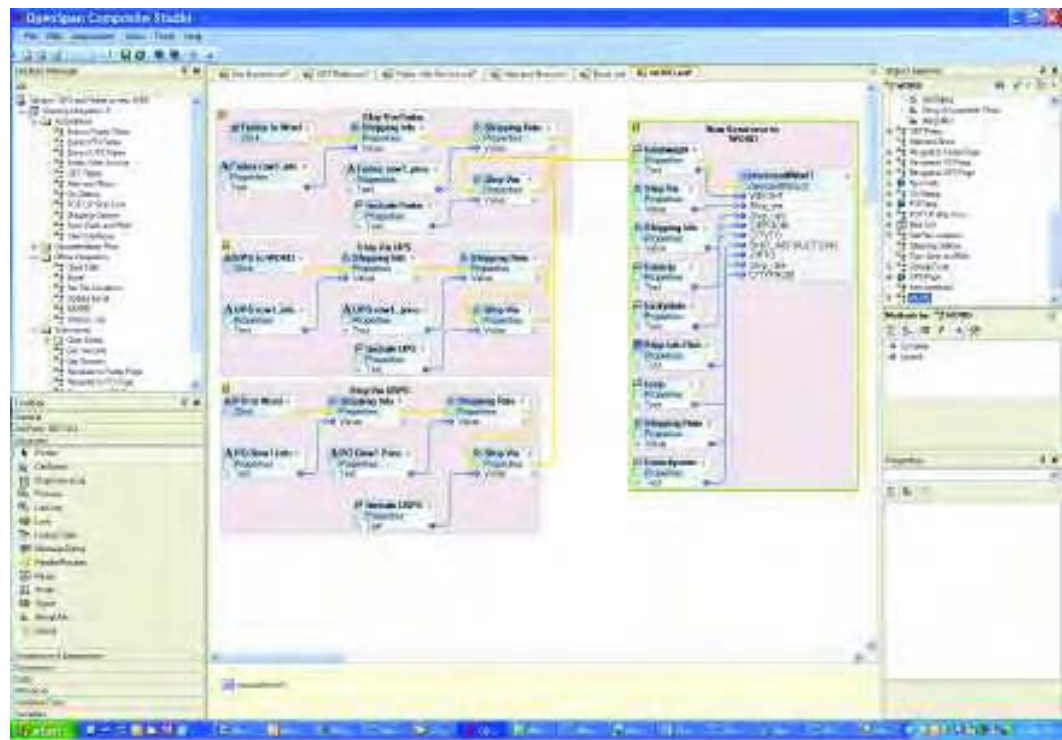
Among the new features are support for Java user interfaces including AWT, Sun and Swing, the ability to work with Oracle Siebel 7+ applications, Windows Vista 32-bit applications and ActiveX controls, and enhanced host support for interfacing with mainframe applications.

The .NET-based platform consists of the OpenSpan Studio visual design environment, the OpenSpan Integrator appli-

cation runtime, and an OpenSpan SOA Module for consuming Web services.

Developers use OpenSpan Studio to build automations and integrations, add functionality to applications and create new composite applications. The OpenSpan platform also integrates virtualized applications, but currently supports only Citrix-based application virtualization.

To create integrations, developers select which applications they want to integrate; OpenSpan Studio interrogates those applications to expose presentation objects. An API is created on the fly, and inserted into the running application in memory without touching the application code on disk. Developers can leverage existing user interfaces or create a new normalized



OpenSpan Studio is visualizing the integration of objects from three shipping applications with Microsoft Word.

interface. With OpenSpan Studio, "you can take anything new and integrate it with anything old," claimed company CEO Francis Carden.

The OpenSpan Integrator runtime executes integrations created in OpenSpan Studio, and monitors and interacts with an application's internal code

and data. It intercepts message calls between the application and the Windows operating system and interacts with objects in the application.

"With this upgrade, OpenSpan continues to build on its value proposition: rapid, simple and cost-effective integration of a wide variety of platforms,

applications and technologies," said Ovum Summit research director Warren Wilson. "By adding native APIs for a variety of popular applications, OpenSpan makes it easier for customers to integrate them with legacy applications that are mission-critical and too expensive to replace." ■

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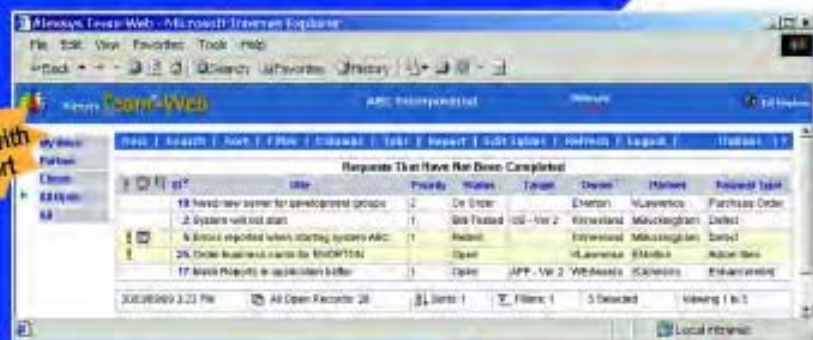
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# For HP's SPI Dynamics, Business as Usual

## WebInspect, other tools to be renamed HP Application Security Center

BY JEFF FEINMAN

Change is afoot throughout SPI Dynamics' Atlanta headquarters, as its representatives began to try out some new letters.

The acquisition of SPI Dynamics by HP was completed Aug. 1, and although product names will stay the same, the SPI Dynamics brand will soon

evaporate. The entire lineup of products from HP's recent purchase will become the Application Security Center, a new addition to HP's "product cen-

ter" branding that already includes HP Performance Center and HP Quality Center.

Erik Peterson, vice president of products and research

for SPI Dynamics, had to correct himself on a few occasions while referring to his company, trying to figure out if he should call it "SPI-HP" or simply "HP." Nevertheless, Peterson is comfortable with the overall plan, noting that HP has made a commitment to SPI Dynamics' products, and the office and personnel in Atlanta will be retained. SPI Labs, the company's security research and development lab, will remain intact as well.

### BYE, SPI

"Over the next couple of months, we'll eventually see SPI Dynamics fade into the history books," Peterson said. "However, all of our products will continue to be supported, and resources will be committed to them."

The momentum SPI Dynamics carried into the acquisition might be most visible in the release of updates to the AMP application management platform and its flagship WebInspect application scanner, on the same day the HP deal closed.

WebInspect 7.5, includes a new scan profiler that analyzes an application before a scan and suggests the configuration settings that will have the best results. "There's hundreds of different types of technologies being used today, and so many different combinations," Peterson said. "With the collision of so many different technologies, you have to spend some time thinking about how you're going to configure your settings. We've taken that burden away from the user, because our profiler will automatically configure settings for a Web application."

The tool now offers improved auditing for AJAX applications, and a traffic monitor that allows users to monitor HTTP traffic in real time during a scan. Every request and response sent by WebInspect is displayed in real time during the crawl and audit. WebInspect 7.5 also adds support for Microsoft Windows Vista.

AMP 3.5 connects all SPI Dynamics' life-cycle products—including WebInspect, QAInspect for quality assurance testers and DevInspect for developers. It delivers a scalable platform used by information professionals, compliance officers and developers to assess and manage application security risk. ■

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## Advanced Data Visualization for Microsoft® Technologies

# Symantec's i3 Homes in on Problem Transactions

BY DAVID WORTHINGTON

Today's complex enterprise architectures can be anathema to anyone assigned with wringing the most performance out of an application. Application Performance Management (APM) tools such as Symantec's i3 can help trace defects back to their particular infrastructure tier and provide a view of applications transactions, claims the company.

Version 8.0 of i3 is Symantec's second branded release, following the merger with Veritas in 2005, and became generally available on Aug 7. The refreshed i3 has updated administration and problem resolution capabilities, and can be customized to integrate with legacy applications.

Sateesh Narahari, senior product marketing manager of the APM business unit at Symantec, explained that customers sought changes in the areas of administration and deployment. To that extent, Symantec has added a command-line interface for administrative tasks, role-based administration and improved scalability.

The SmartLink feature of i3 correlates transaction data across technology tiers, allowing users to determine the root cause of problems within multi-tiered applications. SmartTune provides a summary of any problems found, resolution advice and what-if change analysis, and offers an expanded support library—particularly with regard to Java EE knowledge and advice, Narahari noted.

SmartTune also provides a top-level view of Java EE SmartTune data from Application Service Dashboard. New portlets that enable monitoring of Microsoft SQL and .NET environments, Java EE virtual machines, Oracle and SAP installations will be available this year.

## STACK INTEGRATION

A software development kit enables customers to extend i3's capabilities to legacy applications, and will allow Symantec's partners to build adapters, offering what Narahari called a common view into application performance.

Brian Babineau, a senior analyst with Enterprise Strate-

gy Group, said that i3's ability to correlate activity from servers into a transaction was unique. "Customers can drill down to see where performance issues occurred across elements in-

stead of just looking at where it happened in the infrastructure."

Babineau also lauded i3's what-if change analysis as an important differentiator between

it and other APM solutions.

"Organizations choose multi-tier applications for their modularity, extensibility and scalability, but many performance management solutions don't

extend the same level of flexibility to build customized views to detect, diagnose and correct performance, for custom or legacy applications," said Babineau. ■



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# Oracle Pops Code Into Linux Kernel

Donation brings new file system and better I/O to Linux

BY ALEX HANDY

SAN FRANCISCO — Though Oracle has, at times, played rough with the competition, on Aug. 7 it donated code to the Linux kernel that is expected to help the entire ecosystem. With the mantra that a rising tide lifts all boats, Oracle's developers have been working to build new capabilities into the Linux kernel and the surrounding desktop. The announcement, made at the LinuxWorld Conference & Expo held here, marked the donation of code for a new file system with faster I/O and easier system maintenance.

While Red Hat and Novell jockey for the spot of "top enterprise Linux distribution," Oracle has bridged the two distributions' installation tools by porting SUSE's YaST (Yet Another Setup Tool) to Red Hat Linux. YaST was built to give desktop users a point-and-click method

of setting up all aspects of the Linux operating system, and as a consequence of Oracle's work, the tool will now run on Oracle Linux as well.

For the kernel itself, Oracle has contributed two new projects: the Btrfs file system and an overhauled asynchronous I/O system. The Btrfs was created by an Oracle employee in his spare time, and has since been targeted for full production development. The file system includes many of the same features found in Sun Microsystems' ZFS, such as incremental backups and snapshots.

As for asynchronous I/O in Linux, Oracle is hoping to contribute a completely redesigned system to the kernel, but has given no time frame for the completion of the task. The hope is to build a more generic system in which any system call can become an asynchronous I/O call, simplifying development.

Also at LinuxWorld, the company discussed further plans for bringing data integrity standards into Linux. The Data Integrity Interface (DII), first announced in collaboration with Emulex, LSI and Seagate in April, is a project intended to solidify the implementation of the ANSI T10 DIF (data integrity field) standard in Linux. DII will offer checksums and confirmed integrity from devices, at the kernel level. Oracle hopes to have this capability available for Linux users in the next 12 months.

Finally, Oracle announced at the show that it has released the Oracle Linux Test Kit, which is designed to confirm the ability to run Oracle's database software on top of a given kernel. The kit will make it easier and faster for systems administrators and developers to test a Linux install for Oracle compatibility, without requiring a prior install of the software. ■

# Novell, IBM Stack Up

WebSphere CE slipped into next SUSE bundle

BY ALEX HANDY

SAN FRANCISCO — Novell and IBM have entered into an agreement that will push JBoss out of the Novell application stack, announcing here at LinuxWorld that the next release of WebSphere Community Edition will become part of Novell's SUSE Enterprise Linux stack offerings.

Previously, Novell has made available stacks featuring Red Hat's JBoss or its own Extend application server. But now, with WebSphere CE celebrating its millionth download, Novell is refocusing its service and support offerings on IBM's Geronimo-based application server.

Roger P. Levy, Novell's general manager and vice president of open platform solutions, said that the new stack came about as a result of customer demand. He

claimed that enterprises are eager to purchase stacks of software that are supported, top to bottom, by a single company. "One of the things we try to do is provide software developers a strong choice in platforms. With WebSphere CE, we have a leading platform for people to develop open Java applications," said Levy.

Tom Rosamilia, general manager of application and integration at the middleware division of IBM's Software Group, noted that IBM is aiming to release version 2.0 of WebSphere CE this October. At that time, Novell will integrate the new version into its stack offerings.

But this won't be the first time that IBM's application server has been offered as part of a Novell application stack: Almost a decade ago, NetWare 5.1 was bundled with a port of WebSphere

3.0, in a failed attempt under then-CEO Eric Schmidt to provide a credible alternative to Microsoft's Windows-based juggernaut.

Levy said that Novell would continue to support other application servers, conceding that each customer has its individual needs. But Levy also expects the stack with WebSphere CE to continue exemplifying the dominance already exhibited by that open source application server.

"In general, we have been relatively open and agnostic. Our customers have looked at a variety of solutions. With the incredible success of WebSphere CE, they're in the leading position in the market," said Levy.

For Levy, the key to succeeding with this new stack is Novell's support offerings. "Novell has been in the support arena for quite a long time. Any enterprise software support company has to be," said Levy. "Clearly, within the open source arena, it's even more important [to offer support]." ■

## LINSPIRE GETS UBUNTU TREATMENT

BY ALEX HANDY

SAN FRANCISCO — Linspire might be best known for its namesake Windows-like distribution of Linux that was once offered as Lindows and preinstalled on computers sold at Wal-Mart and elsewhere. Since then, the company has signed a controversial collaboration agreement with Microsoft but hasn't let its product lines molder. The company released Freespire 2.0, the company's free Linux distribution, at LinuxWorld in August. The new Freespire is the first based on Ubuntu; version 1.0 drew from Debian, while Ubuntu itself is built on Debian's technology. ■

## OPENSUSE TURNS 2

BY ALEX HANDY

SAN FRANCISCO — The OpenSUSE project turned 2 years old during LinuxWorld in August. The anniversary was celebrated with the release of a refreshed build service, and the public beta of OpenSUSE 10.3. The build service update allows developers to package their Linux applications for quick deployment into any of the major Linux distributions: Packages can be built for Debian, Fedora, Mandriva, Red Hat, Ubuntu and any SUSE variant. The aim is to bridge the gap between the many disparate distributions used around the world, few of which can install applications designed to run on the others. This new build system is included in the OpenSUSE 10.3 beta release. ■

## 'PRO-GRADE' POSTGRESQL DEBUTS

BY P.J. CONNOLLY

SAN FRANCISCO — EnterpriseDB announced the release of what it calls the first professional-grade distribution of the PostgreSQL database for Linux, at LinuxWorld on Aug. 7. The company has loaded the EnterpriseDB Postgres package with graphical administration and monitoring tools, cryptography, GIS and replication features, and full-text search and database linking. The company also announced the availability of GridSQL for EnterpriseDB Advanced Server, the company's Oracle-compatible RDBMS. GridSQL allows OLAP applications to run as if they were accessing a single database on a single server, masking the distribution of computing resources and data among grid nodes. ■

## ONE LAPTOP PER CHILD

The Creative Commons booth displayed the almost-ready XO-1, also known as The One Laptop Per Child. This little green Linux machine costs US\$100, and is slated to include a yo-yo shaped charger, which generates current through a lawn-mower-style pull-cord. The machine uses AMD processors and an operating system based on Red Hat's Fedora core.



Photo: Scott Beale / Laughing Squid www.laughingsquid.com

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# UBmatrix Scales Up XBRL-Based Business Reporting Tools

BY DAVID WORTHINGTON

Generating business and financial data is easy, but distributing it to be repurposed while keeping it tightly coupled with its context and meaning can be a challenge. With compliance

requirements increasing, governments and organizations are eyeing XBRL, the XML-based Extensible Business Reporting Language, as a solution, while companies such as UBmatrix are creating tools that work

with the emerging standard.

UBmatrix released the latest versions of its XBRL solutions on July 24, which together form a platform to prepare, publish, validate, exchange and analyze business and financial data. The prin-

cipal products include UBmatrix Processing Engine, UBmatrix Report Builder and UBmatrix Enterprise Application Suite.

Both the Committee of European Banking Supervisors and the Federal Deposit Insur-

ance Corp. in the United States have adopted XBRL as a standard for bank reporting, and the U.S. Securities and Exchange Commission is piloting XBRL statement filings.

## PROCESSING ENGINE

The core technology of UBmatrix's solution is the XBRL processing engine. Version 3.1 of the engine executes XBRL code in a fashion similar to the way a database engine executes SQL. The updated engine supports multithreading and streaming to help increase throughput and allows the use of formulas, in anticipation of XBRL's standardization.

Sunir Kapoor, president and CEO of UBmatrix, claimed that one of the core benefits of XBRL is that its data model can be changed at runtime.

UBmatrix Report Builder Microsoft Office Edition 2.1 integrates with Microsoft's Excel to provide a desktop tool for creating, modifying, populating and validating XBRL documents. Users have the option to either assemble data using Excel's interface or populate a spreadsheet programmatically via the Report Builder API. It is also designed to operate with automatic and manual workflows.

Other additions to Report Builder 2.1 include a built-in instance editor, improved XBRL mapping and a simplified way to create rule templates and map existing Excel spreadsheets.

UBmatrix also updated its server-based suite for the deployment of enterprise XBRL-based reporting applications. Enterprise Application Suite 3.5 includes new versions of Taxonomy Manager, Reporting Manager and administrative tools designed to exert more control over reporting workflows.

The suite also integrates with desktop development and deployment tools Taxonomy Designer and Report Builder. Users have the ability to prequalify report submissions and manage the relationship between submitters and analysts.

UBmatrix's Kapoor said that XBRL is suitable for more than just reporting: Any bidirectional exchange of data can benefit, because XBRL provides a standard way to tag information in any industry domain and facilitates its exchange. ■

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# Silverlight and Mono Teams Share Ideas

◀ continued from page 1

ux. Microsoft is also soliciting contributions to the Silverlight platform from the open source community, he said.

According to de Icaza, Scott Guthrie, general manager within the Microsoft Developer Division, pulled him aside during a Microsoft workshop on dynamic languages earlier this year to offer advice and support on Mono's Moonlight implementation of the Silverlight specifications. The Moonlight project was strongly inspired by Guthrie's recommendations, de Icaza said.

The collaboration has continued to bear fruit, de Icaza noted. The "right people" inside and outside of Microsoft have answered the Moonlight product team's requests for resources, he said.

## CONTINUING THE DÉTENTE

The Moonlight team was invited to participate in a road-map presentation for Silverlight in mid-August and was expected to provide its recommendations for the platform, de Icaza said.

The Moonlight team has also devised a method to extract Silverlight from the browser for use in native Linux applications. "We added some features that are not compatible with the Web implementation," de Icaza said. "We are embracing and extending Microsoft."

He also discussed Microsoft's Silverlight product road map, although Microsoft would not confirm those details. He claimed that a refresh of Silverlight 1.1 is slated for September, and will incorporate new controls, address a key-board handling issue, and add support for data binding with the integration of Language Integrated Query.

Microsoft spokesperson Nick Sherrill declined to comment about Moonlight, beyond stating that Microsoft is pleased with the interest Silverlight has generated within the developer and designer communities.

"What I don't understand is why they [Microsoft] just don't do the Linux version [of Silverlight] themselves. Without that, the Linux version will always be the red-headed stepchild—not supported by Microsoft, always lagging behind the Windows version,

etc.," quipped Directions on Microsoft analyst Greg De-Michillie. "If Apple can do Windows software [iTunes] because it's good for their overall business, why can't Micro-

soft do Linux software for the same reason?"

The Moonlight deliverables will not be made generally available until months after Microsoft releases its final bits.

de Icaza indicated that Mono would be four to five months late in delivering Silverlight 1.0 functionality, and that it is impossible to estimate a release date for a 1.1-compatible

implementation at this point.

Microsoft has not committed to a release date for Silverlight 1.1, but Silverlight 1.0 was in the release candidate stage at press time. ■

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# Ruling May Spell

◀ continued from page 1

the platform safe, but the industry is willing to defend the platform both together and individually.”

Zemlin added that, while Novell did the lion's share of work on this case, IBM, the Linux Foundation and Red Hat had all banded together.

Though Zemlin maintained that this case is no longer relevant to users considering a move to Linux, the legal wranglings of SCO and its foes have drawn international attention. Mark Shuttleworth, CEO of Canonical, the South African company behind the Ubuntu Linux distribution, told SD Times that the decision confirms that open source projects can stand up to legal scrutiny.

“Linux and other free software projects have very good standing under copyright law,” wrote Shuttleworth. “Multiple courts in many different jurisdictions have now validated the copyright status of Linux and the GPL. The free software community cares deeply about copyright—contrary to the perception of free software as anarchist, the community is very focused on the elimination of software piracy and other forms of copyright violation. The latest decision in the SCO case strengthens the body of legal precedents and gives comfort to those considering a deployment of Linux.”

Although it would seem that SCO is now left with few alternatives, the company's court cases against AutoZone, IBM and Red Hat are expected to remain on hold, pending the final outcome of this trial. The company issued a statement after the ruling of Judge Kimball was announced, and in it the company hints at future litigation and addi-

tional points of contention.

From the statement: “[T]he court did not dismiss our claims against Novell regarding the non compete provisions of the 1995 Technology License Agreement relating to Novell's distribution of Linux to the extent implicated by the technology developed by SCO [referring to The Santa Cruz Operation as well as SCO Group] after 1995. Those issues remain to be litigated. Although the district judge ruled in Novell's favor on important issues, the case has not yet been fully vetted by the legal system and we will continue to explore our options with respect to how we move forward from here.”

SCO did not respond to requests for interviews.

### SOME LEGAL ISSUES LEFT

Novell will not be leaving the courtroom soon, either, as global public relations director Bruce Lowry said that, while this summary judgment was certainly in his company's favor, some legal issues are still left to resolve. Among them is Novell's countersuit against SCO for slander of title, which will begin sometime in September.

“We've said that [there is no Unix in Linux] from the beginning of the SCO case. When [the] SCO [lawsuit] first came out in 2003, this was a critical time for Linux in terms of nascent enterprise adoption. We don't believe there's any Unix in Linux, and we've spent in the tens of millions of dollars to fight SCO on this. We don't think enterprises have any reason not to use Linux,” said Lowry.

Lowry also pointed out that both Microsoft and Sun Microsystems purchased licenses for the Unix platform

## BMC Makes a Record of Problems

Enhanced root cause tool automates resolution

BY DAVID RUBINSTEIN

Developers spend a great deal of time trying to identify problems in applications so they can resolve them. So on Aug. 13, BMC Software released an enhanced version of the AppSight root-cause analysis software it acquired, as part of last year's purchase of Identify Software, that the company claims reduces the time needed to fix defects in code.

“Developers go through requirements analysis, design, coding and a number of levels of testing. Half of the time in a development project life cycle is spent in testing,” said Eldad Maniv, vice president of BMC's Identify business unit. “Why do developers spend some 60 percent of their time resolving problems? A significant part of that is figuring out the exact root cause of a problem. That's an iterative process; that takes a lot of time.”

The AppSight problem resolution

system, Maniv said, records everything that goes on when an application is in use, “like an aerospace black box.” When a problem occurs, it is recorded, and the tool gathers the information automatically, saving the time it takes to get to the root cause. “There's no re-creation necessary,” he claimed. “You just play it back. The analysis is simpler, and there is no guesswork or multiple iterations” created to try to re-enact the problem.

The enhanced version adds a new QA module that enables testers to record application execution, log the problems detected, and attach those logs to defect reports in tracking tools, according to the company. The module has an open API for integrating with defect-tracking tools; integrations with IBM Rational ClearQuest and HP (formerly Mercury) Quality Center come out of the box. ■

# The End for SCO

from SCO after the company began litigating in 2004. Judge Kimball's ruling has seemingly invalidated those licenses, leaving question marks over all three companies, with the possibility of more lawsuits being directed toward SCO.

Bernard Golden, CEO of open source consultancy Navica, said that he believes Linux, as a platform, is now relatively safe from the specter of litigation. "It's not over till the fat lady sings, but I'd say it's two outs and the bottom of the ninth. [The judge] came out and said, 'You don't own all the stuff you said you own,'" said Golden. "I don't see any fur-

ther legal impediments."

Golden did point out that Microsoft is claiming that 235 of its patents are infringed by Linux, but he added that Microsoft has decided to pursue this avenue in meeting rooms rather than in courtrooms.

"It's been an odd thing," said Golden of SCO's four-year journey. "A couple of years ago, it was on everybody's lips, but everything's dragged out so long that everyone got the feeling there was no 'there' there." He added, "I think everyone realized it was smoke and mirrors, and moved on." ■

## THE BACKGROUND TO THE CASE

### THE MESSY ORIGINS:

**1969:** Unix developed by a group of employees at AT&T's Bell Labs, including Ken Thompson, Dennis Ritchie and Doug McIlroy.

**1978:** Doug and Larry Michaels found The Santa Cruz Operation, a Unix consulting company.

**1979:** Microsoft licenses Unix from AT&T, and develops Xenix for Tandy/Radio Shack and x86 platforms, with additions from BSD.

**1983:** The Santa Cruz Operation licenses Xenix for Intel processors.

**1987:** Microsoft transfers ownership of Xenix to The Santa Cruz Operation, which later develops the System V Release 4-derived SCO Unix.

**1988:** Chrysler purchases a Unix source license from AT&T.

**1989:** Unix System Laboratories established as a part of AT&T's Bell Labs. USL later becomes a separate AT&T subsidiary.

**1991:** AT&T and Novell establish Univel joint venture to develop UnixWare.

**1992:** USL sues Berkeley Systems Design, and later, the Regents of the University of California, for copyright infringement. Later in the year, AT&T sells USL and all of the Unix assets to Novell.

**1994:** USL v. BSD is settled in February 1994 without admission of liability. In the meantime, the limited access to BSD's software leads developers to contribute to a Unix-like operating system developed by Finnish graduate student Linus Torvalds, which becomes Linux.

**1995:** The Santa Cruz Operation acquires control of UnixWare from Novell, but ownership of the underlying intellectual property remains in question for the next 12 years.

**2001:** The Santa Cruz Operation sells its Unix business to Caldera Systems, which in 2002 changes its name to The SCO Group (SCO). The Santa Cruz Operation changes its name to Tarantella, and focuses on its remaining application server business.

### THE SCO GROUP ERA:

**June 2002:** Darl McBride takes over as CEO of SCO.

**August 2002:** A Caldera employee sends an e-mail to SCO management stating that internal investigations have revealed no crossover of Unix code in the Linux kernel. An outside consultant disagrees.

**March 2003:** SCO sues IBM for US\$1 billion, for breach of contract and other charges.

**August 2003:** Red Hat sues SCO for false advertising. The case is stayed pending the outcome of SCO v. IBM.

**January 2004:** Novell offers its users indemnification protection, and publishes correspondence between itself and SCO. A week later, SCO files suit against Novell, charging slander of title. The suit demands that all Unix-related copyrights and intellectual properties be turned over to SCO, as the rightful holder of those properties.

**March 2004:** SCO sues AutoZone in federal court for copyright infringement, after the auto parts retailer moves some of its operations from SCO's OpenGroup to Linux. The lawsuit is postponed, pending the outcome of the suits against IBM, Novell and Red Hat. On the same day, SCO sues DaimlerChrysler in Michigan, alleging that its use of Linux violates contract and copyright.

**December 2004:** A Michigan circuit court judge dismisses the last allegation in SCO v. DaimlerChrysler. SCO can relitigate, but it must first pay DaimlerChrysler's legal costs.

**June 2006:** A federal judge in Utah grants IBM's motion to strike most of SCO's evidence, on the grounds that SCO could not specify the infringing code.

**Aug. 10, 2007:** U.S. District Court Judge Dale Kimball declares that Novell owns the copyrights to Unix and UnixWare.

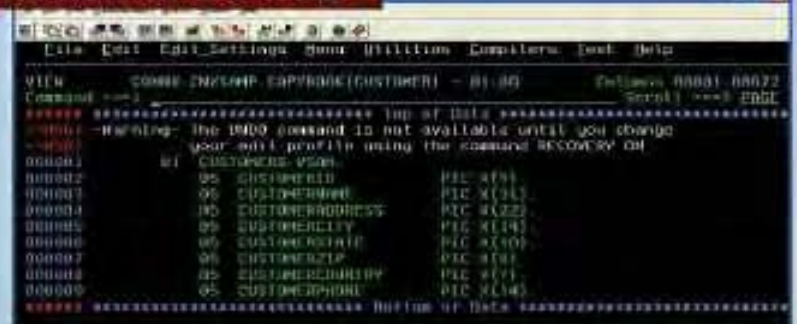
**Aug. 31, 2007:** IBM and SCO are expected to issue statements regarding the future of their case, following the Aug. 10 ruling.

**September 2007:** Novell's countersuit against SCO for slander of title is expected to begin.

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# Security Issues Hold Back SaaS Acceptance

◀ continued from page 1

2000. Potential customers also raise concerns about self-sufficiency—the ability to control the software themselves—and about integrating that software with other offerings, he said. These are the core issues, added OpSource chief technology officer John Rowell. “And they are the same for any software.” OpSource provides services that help software companies adopt the SaaS delivery model.

## ‘IN SOMEONE’S GARAGE’

When development managers opt for SaaS solutions, they do so primarily to take advantage

of the toolmaker’s institutional knowledge, which is very difficult to replicate on staff, said Voke analyst Theresa Lanowitz. When software is provided as a service, “you don’t need a full-time person [dedicated to] LoadRunner,” she said referring to the HP load-testing offering. Relying on a service provider—instead of deploying and managing the software on servers located in-house—helps immensely with managing distributed teams, and it is also cost-effective, she said. “But people haven’t understood the full value of this approach.”

That’s likely because, beyond HP’s offerings, there are relatively few enterprise hosted development tools, noted Forrester’s Schwaber. Among the companies that provide SaaS-based offerings for enterprise development are Empirix, which delivers load-testing and performance management software, and IBM, which makes the Watchfire application security tools and other offerings as hosted services. But the majority of the hosted offerings in the development tools market are “lightweight project management tools small enough to be hosted in someone’s garage,”



*‘Source code...is perceived as more strategic to the company’ than customer data.*

—Marc Olesen, vice president of managed software solutions at HP

Schwaber said, citing eProject as an example.

Another indication that enterprise application development teams have not bought into the SaaS delivery model is CollabNet’s decision, about a year ago, to begin selling its collaboration and other software development tools under a traditional licensing agreement. Earlier, the company made its software available only on a service basis, said company CEO Bill Portelli. “Our position on SaaS is that we are agnostic,” he said. But he also noted that “SaaS has better business benefits in terms of cost savings.” Portelli declined to say what percentage of the company’s customers opt for SaaS, compared with traditional software licensing.

HP’s Olesen also declined to answer that question. “We don’t break out those numbers,” he

said. But he added that buying HP testing tools on a service basis costs about 20 percent less than licensing the software, when measured over the course of three years.

Lanowitz said it’s essential that the enterprise development teams move toward the SaaS delivery model. “That is the direction we have to go,” she said. “The way we consume software now is archaic. The vendor-to-consumer model is more than 25 years old.” She said that in the long run, all development tools are likely to be delivered as services. But a hybrid model, where some activities of the software development process are hosted outside the company and others remain in-house, is likely to emerge in the short term. “Once you try the service approach, you don’t go back to other models.” ■

## A STEADY RISE IN SAAS SPENDING

Worldwide total software revenue for software as a service (SaaS) within the enterprise software markets is projected to surpass US\$5.1 billion in 2007, a 21 percent increase from 2006 revenue, according to research firm Gartner. The market is poised for strong growth through 2011, when worldwide revenue will reach \$11.5 billion.

Enterprise application software markets included in the forecast are content, communication and collaboration; CRM, digital content creation and office suites; enterprise resource planning; and supply chain management.



# Configuration Subverts Message of Collaboration

## CollabNet must figure out how SourceForge fits into strategy

BY JENNIFER DEJONG

Time was, when CollabNet was all about, well, collaboration. The company sold software that made it easy for geographically distant teams to work together on development projects. That offering—CollabNet Enterprise Edition—hasn’t gone away, but it’s no longer at the heart of how the company positions itself. “CollabNet has tried on a bunch of different personae,” said Forrester analyst Carey Schwaber. “And they are not as focused on collaboration now.”

CollabNet’s most recent persona is that of a company that sells services and support for Subversion, the popular, open source software configuration management (SCM)

tool, around which its collaboration offering is built. “We are doing for Subversion what Red Hat has done around Linux,” said CollabNet CEO Bill Portelli. CollabNet sells training and support services for large enterprises that use the open source offering. And it also provides migration services for those that want to move their source code from other SCM tools, such as Subversion’s open source predecessor CVS, or ClearCase from IBM Rational.

CollabNet is the primary sponsor of the Subversion project. The company also sells Cubit, an offering that lets development managers take advantage of a service-based test and build infrastructure,

instead of having to set up their own servers to manage the test and build process.

## A GOOD THING

Further clouding the clarity of CollabNet’s message is the company’s April 2007 acquisition of VA Software’s SourceForge Enterprise Edition business. “It’s a good thing that they combined because the [two collaboration software offerings] were in a feature war with each other, and they are [almost] interchangeable,” said Schwaber. “There is very little difference between the two products.”

Asked how the SourceForge Enterprise Edition differs from CollabNet Enterprise Edition, Portelli said:

“SourceForge is essentially the on-site piece. CollabNet is the on-demand piece.” On-site and on-demand refer to the typical (on-site) software licensing model and the hosted (on-demand) software-as-a-service approach to delivering software.

CollabNet sells both offerings today, and expects to release a combined version in the first quarter of 2008. Like CollabNet Enterprise Edition, the combined offering will be sold as a service, as well as through the traditional licensing model.

SourceForge community manager Ross Turk said CollabNet’s acquisition of SourceForge Enterprise Edition is enabling the company to con-

centrate on SourceForge.net, its advertising-supported Web site for hosting open source development projects. “We used to be a media company with a software asset. Now we have a better focus,” Turk said. SourceForge also operates the technology news Web site Slashdot, among other Web sites. VA Software changed its name to SourceForge Inc. in May 2007.

Schwaber said CollabNet’s decision to downplay the collaboration message is a good one. “It’s harder to drive that message now that other development tools also support collaboration among globally distributed teams.” She cited CodeGear’s JBuilder, and Jazz, IBM’s emerging collaboration offering, as examples. The Subversion message is taking hold, Schwaber believes, adding, “CollabNet is doing well financially. They are starting to get traction.” ■

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# Mobile Stands Out at LinuxWorld Expo

Motorola takes wraps off Linux platform; LiMo Foundation adds new members

BY P.J. CONNOLLY AND ALEX HANDY

SAN FRANCISCO – Although Motorola has been present at the LinuxWorld Conference & Expo before, this year the company celebrated its dedication to remodeling Linux into the ultimate phone operating system. The company hopes to move 60 percent of its phones onto Linux over the next few years, and to help with this shift, it released its own Motodev Eclipse-based IDE for developing mobile applications earlier this year in March.

Now, that effort has begun to bear fruit. At the show, Motorola launched its Motomagx next-generation mobile Linux development platform, and announced the first two devices based on the new platform: the RAZR2 V8, which is Motorola's first Linux-based device in the North American market, and the music-optimized MOTOROKR Z6. The company claims that through early August, it had already sold more than 9 million Linux-based handsets.

Motomagx works with applications developed in Java ME, and plans for future releases include a new WebUI environment that will allow the use of widgets and Web 2.0 technology, and a native Linux application environment. Developers wishing to try the Java ME implementation may download the Motodev Studio for Java ME from [www.motorola.com/developer](http://www.motorola.com/developer); plug-ins supporting native Linux and WebUI environments are expected to become available by the end of the year.

"This opens exciting possibilities for what tomorrow's applications will be able to do and the new device experiences they will support," noted Christy Wyatt, Motorola's vice president for ecosystem and market development.

#### STRETCHING THE LIMO

Meanwhile, the independent, not-for-profit LiMo Foundation announced the first wave of new recruits to the organiza-

tion at LinuxWorld. Motorola, NEC, NTT DoCoMo, Samsung Electronics and Vodafone established the foundation in January.

Aplix and Celunite, which focus on Java middleware and mobile platforms respectively, have joined as "Core" foundation members with board seats, along with LG Electronics, McAfee and Wind River Systems.

Meanwhile, device management provider Innopath joins ARM, Broadcom, Ericsson, Korean carrier KTF, MontaVista Software, and Dutch chipmaker NXP as new associate members of the foundation.

Kiyohito Nagata of NTT DoCoMo, chairman of the LiMo Foundation, noted in a prepared statement that the founders welcomed the new members, adding, "By joining the LiMo Foundation, members will be able to help guide the development of an open mobile terminal platform based on Linux that will speed up the delivery of handsets and



SD Times Photo Composite: Erin Broadhurst

Two of Motorola's just-introduced phones, RAZR2 V8 (left) and MOTOROKR Z6, are powered by the company's new Motomagx Linux platform.

further enhance the consumer experience."

The LiMo Foundation's goal is to create a globally competitive, Linux-based software platform for mobile devices. It claims to be blending innovation, scalability and transparency with the mobile community's best practices to

create a business model capable of widespread adoption. The first handsets based on the LiMo platform are expected to retail in the first half of 2008, while analysts predict open platforms to be the fastest growing segment of the mobile software and services market through 2009. ■



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# Nokia Revamps Mobile Chipset License Strategy

BY P.J. CONNOLLY

Nokia announced a sea change in its chipset development and licensing strategy in early August, as part of plans to expand its use of commercially available chipsets for future devices. The company stressed that it would continue to develop its wireless modem technology, including protocol software and related digital design for WCDMA/GSM and succeeding technology, but that other parts of its chipset development efforts would be discontinued.

The licensing and multi-sourcing strategy is a "pragmatic move," noted Niklas Savander, Nokia's executive vice president for technology platforms. He added, "We believe that our renewed strategy will allow us to concentrate on

developing core chipset technologies, while increasing our R&D efficiencies." The agreement will allow licensees to use Nokia's technology in chipsets for the open market, as well as those produced for Nokia.

The company outlined its current selection of suppliers: Broadcom will supply EDGE chipsets to Nokia, as Infineon will do for GSM hardware, and likewise, STMicroelectronics for 3G technologies; Texas Instruments will continue to be a broad scope supplier across protocols.

An announcement of intent released the same day noted that Nokia expects to transfer part of its integrated circuit operations in Finland and the United Kingdom to STMicroelectronics by the end of the



The new strategy is a 'pragmatic move,' says Nokia's Savander.

year, pending local personnel consultation processes. About 200 employees will be affected in both countries.

As part of the agreement, STMicroelectronics will design and manufacture 3G chipsets for Nokia and others, using Nokia's energy management, modem and RF technologies. The first of these will be a HSDPA (high speed data packet access) chipset, for which no release date was announced. ■

# Enea Lets the Linx Out

## Company opens up IPC platform

BY P.J. CONNOLLY

Developers looking to add high-performance interprocess communications services to their distributed systems got a free lunch of sorts, when Swedish network software provider Enea announced at the end of July that it had made its Linx for Linux interprocess communication (IPC) platform available as open source, under a dual BSD-GPL license.

Linx is designed to be media- and protocol-independent; it can run over any interconnect, Enea claims, but can use schemes such as TCP or UDP as "bearer protocols" without regard to system topology. This allows Linx to supply IPC services across hardware as well as software boundaries, and designers can mix Linux with other operating systems, real-time or otherwise.

John Smolucha, vice president of product marketing and business development at Enea, noted "recent analyst

studies have shown that open source software is used by 70 percent of developers worldwide. We are confident that offering this fundamental communications framework freely will increase access to this superior technology."

The Linux implementation of Linx consists of an OS-specific kernel module, a user-space API that supplements the kernel module's socket interface, and tools for configuring and supervising inter-node communication, including the Linxdisc daemon that can automatically discover and connect to other Linx nodes. Two example programs are also included: a benchmarking tool for measuring Linx's performance, and a simple demo application that demonstrates the API's features.

Enea will continue to offer Linx for its proprietary OSE and OSEck real-time operating systems under its proprietary commercial license terms. ■

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# Take a Look Industry thought leaders share their favorite development In a Book

BY JEFF FEINMAN

**R**eading is fundamental, especially to software developers trying to keep up with the latest state-of-the-art technology concepts and tools.

What have developers and industry thinkers been cooking on their literary burners recently? Well, Peter Coffee, director of platform research at Salesforce.com and former technology editor of eWeek, said that he recently delved into "Dreaming in Code" by Scott Rosenberg (Crown) because of its importance as a cautionary tale for anyone in a position to define or contribute to a nontrivial software project.

"This book has been called the coder's version of 'The Soul of a New Machine,' but there's a fundamental difference," Coffee said. "The hardware crew in Tracy Kidder's book produced a product that created competitive advantage for their company, but Scott Rosenberg's inside look at a software development effort does not come to a tidy end of a shipped result."

David Intersimone, chief evangelist for Borland Software, said he recently read three very intriguing books that help him look forward and ponder what programming might have the capabilities to accomplish in the near future: "The Meaning of the 21st Century" by James Martin (Riverhead), "The Extreme Future: The Top Trends That Will Reshape the World for the Next 5, 10, and 20 Years" by James Canton (Dutton) and "The Singularity Is Near: When Humans Transcend Biology" by Ray Kurzweil (Viking).

Intersimone said that with software being an integral part of the modern global economy, the way in which software is created will be further influenced by what is happening in the outside world.

Colorado-based writer Jeff Duntemann talked about "The Wiki Way" by Bo Leuf and Ward Cunningham (Addison-Wesley): "I've always had mild doubts about the wiki idea, but this book convinced me that the technology is sound, and what implementations like Wikipedia primarily lack is simply adult supervision."

Duntemann also said he recently enjoyed "The Tomes of Delphi: Algorithms and Data Structures" by Julian Bucknall (Wordware) because of its adept explanations of algorithms and data structures for Borland's Delphi programming language, also known as Object Pascal.

The desktop PC is a topic that Bernard Golden, CEO of systems integrator tool provider Navica, has been reading about recently. Golden cited the book "Building the Perfect PC" by Robert Bruce Thompson and Bar-

bara Fritchman-Thompson (O'Reilly), which talks about the advantages of building a PC for one's exact specifications and needs.

Scott Barber, performance testing specialist and CTO of PerfTestPlus, said he found the book "Blink: The Power of Thinking Without Thinking" by Malcolm Gladwell (Little, Brown and Company) relevant despite the fact it wasn't written specifically for software professionals.

"The book demonstrates why developers and testers need to both pay attention to their instincts, while at the same time being wary of them while evaluating the quality of software," Barber said. "While this is not directly a software book, I have trouble imagining it not being enlightening to anyone who works with software."

Andrew Hunt, co-author of "The Pragmatic Programmer," found that his software development tastes feasted on something a little different with "The 4-Hour Workweek" by Timothy Ferriss (Crown).

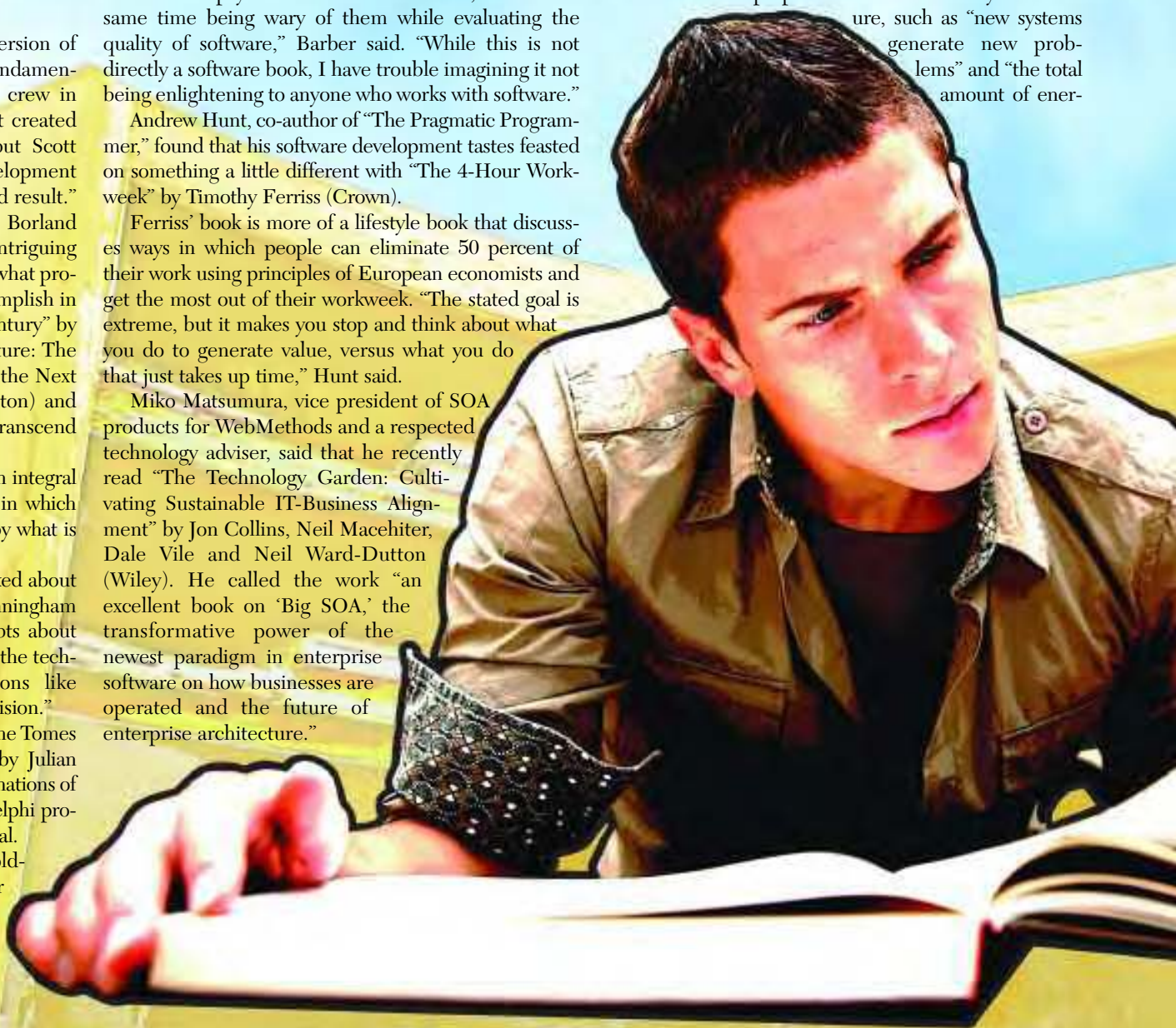
Ferriss' book is more of a lifestyle book that discusses ways in which people can eliminate 50 percent of their work using principles of European economists and get the most out of their workweek. "The stated goal is extreme, but it makes you stop and think about what you do to generate value, versus what you do that just takes up time," Hunt said.

Miko Matsumura, vice president of SOA products for WebMethods and a respected technology adviser, said that he recently read "The Technology Garden: Cultivating Sustainable IT-Business Alignment" by Jon Collins, Neil Macehiter, Dale Vile and Neil Ward-Dutton (Wiley). He called the work "an excellent book on 'Big SOA,' the transformative power of the newest paradigm in enterprise software on how businesses are operated and the future of enterprise architecture."

## TELL YOUR FRIENDS

Whether they're fresh newcomers on the shelf or classics that continue to provide meaningful insight, these are the books that those in the software development world would readily recommend to a colleague.

Salesforce.com's Coffee quickly named "The Systems Bible: The Beginner's Guide to Systems Large and Small" by John Gall (General Systemantics/Liberty), the third edition of "Systemantics," a series created by Gall in which he proposes several "laws" of systems failure, such as "new systems generate new problems" and "the total amount of ener-



## books, old and new

gy in the universe is constant." The book takes a fairly satirical look at systems behavior. In describing the book, Coffee said, "a somewhat bulky expansion on the elegantly concise satire 'Systemantics,' Gall's compendium of anecdotes and analyses should be considered essential reading for anyone who designs, implements or operates systems involving machines and/or human beings."

Duntemann offered up a trio of books as must-reads for anyone involved in Web site and Web application development: "Developing Rich Clients with Macromedia Flex" by Steven Webster and Alistair McLeod (Macromedia), "Designing Visual Interfaces" by Kevin Mullet and Darrell (Prentice Hall) and "Web Pages That Suck: Learn Good Design by Looking at Bad Design" by Vincent Flanders and Michael Willis (Sybex). Duntemann said that Webster and McLeod's work is the "only significant nuts and bolts book I've seen on Flex," while Mullet and Sano provide a great discussion on the simplicity in visual elements used in software, with emphasis on the difficulty on iconic communication.

Tony Wasserman, director of the software management program at Carnegie Mellon West, said he would recommend the Web site design book "The Design of Sites: Patterns for Creating Winning Web Sites" written by Douglas K. van Duyn, James A. Landay and Jason I. Hong (Prentice Hall). He also said that he is a big fan of O'Reilly's "Missing Manual" series, which are casual and easy-to-read manuals for popular consumer software and hardware products. "While it is aimed at end users rather than developers, developers are end users too," Wasserman said. "The authors and editors of these books deserve a lot of credit for their organization and readability."

Hunt said that he would recommend "Programming Erlang: Software for a Concurrent World" by Joe Armstrong (Pragmatic Bookshelf), which is focused around teaching the Erlang programming language. The language is designed for building parallel, distributed systems. Hunt said that developers might want to get involved in learning Erlang because of the advantage it offers using the concurrency inherent in multicore processors.

Lori MacVittie, solution engineer for application services for F5 Networks, said that she would recommend "XSLT & XPath: A Guide to XML Transformations" by John Robert Gardner and Zarella L. Rendon (Prentice Hall). According to MacVittie, this is a useful book because of how important it is to understanding XML.

"This book was a great education in understanding both XSLT and XPath and their relationship to each other, and continues to serve as a reference to both languages," she said. "It's a must-have for Web 2.0 and SOA-focused developers today, and should probably go on the 'should read' list for network- and security-minded folks as well. 'Smashing the stack' may very soon be replaced with 'smashing the DOM.'"

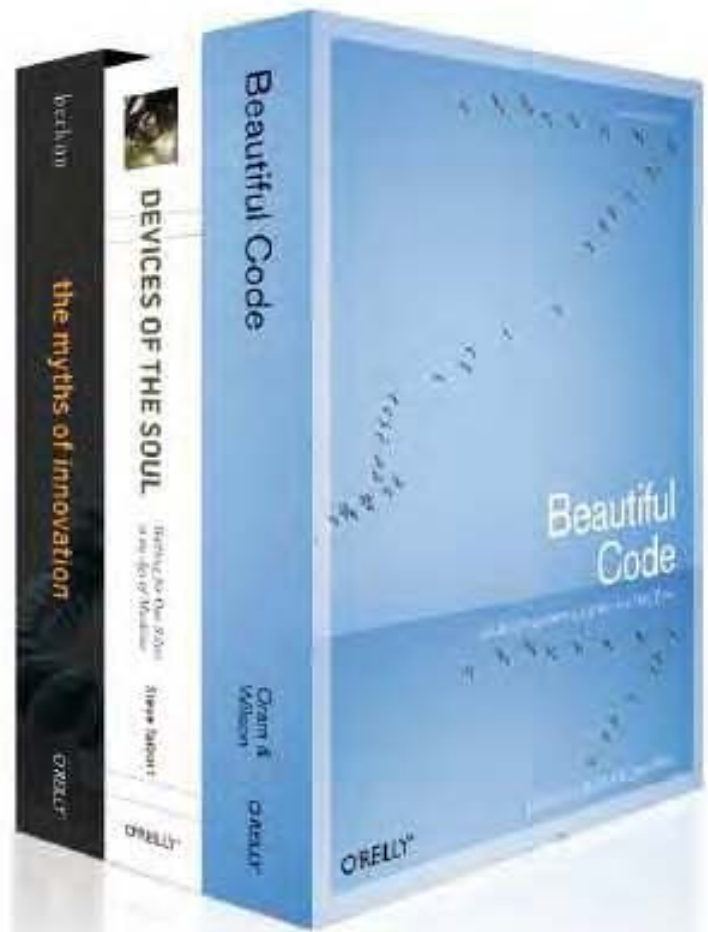
PerfTestPlus' Barber's pick is "An Introduction to General Systems Thinking" by Gerald M. Weinberg (Dorset House). The book, written more than 30 years ago, is an introduction to systems theory and computer science applications, and is frequently used in university courses and professional seminars. Barber said that the thought process Weinberg describes can seem bizarre at first, but when read with an open mind, it can be very satisfying.

Robin Goldsmith, president of training provider Go Pro Management, jokingly suggested developers should read his book "Discovering REAL Business Requirements for Software Project Success" (Artech House), but he did have some other recommendations. "In my process improvement courses, I refer students to Tim Koomen and Martin Pol's 'Test Process Improvement' [Addison-Wesley], which I've just been rereading and finding [even] more edifying. I also

continued on page 38 ►

SD Times Photo Illustration: Erin Broadhurst

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# How Development Books Stack Up for

◀ continued from page 37

have the greatest respect for Bob Grady's two books 'Successful Software Process Improvement' and 'Practical Software Metrics for Project Management and Process Improvement' [Prentice Hall]."

## CLASSIC HITS

Just as there are classic novels that have stood the test of time, there are certain software books that have displayed a magnificent lasting ability. Andrew Binstock, the principal analyst at Pacific Data Works and columnist for SD Times, said one book he considers to be an all-time classic is "Refactoring: Improving the Design of Existing Code" by Martin Fowler, Kent Beck, John Brant, William Opdyke and Don Roberts (Addison-Wesley) for its advice on making object-oriented code simpler and easier to maintain. Some of his other favorites include "Compiler Design in C" by Allen I. Holub (Prentice Hall), "Working Effectively With Legacy Code" by Michael C. Feathers (Prentice Hall) and "Operating Systems Design and Implementation" by Andrew S. Tanenbaum (Prentice Hall).

Salesforce.com's Coffee said that one timeless classic he holds dear is "The UNIX-Haters Handbook" by Simson Garfinkel, Daniel Weise and Steven

Strassmann (Wiley). "There are any number of books about the poor usability of machines from the viewpoint of clueless masses, but 'The UNIX-Haters Handbook' is a vivid reminder that even hardcore techies are perfectly capable of confusing each other," he said.

Duntemann said that the data encryption book "Applied Cryptography" by Bruce Schneier (Wiley) is a book that he considers to be a timeless classic. He also mentioned Randall Hyde's "The Art of Assembly Language" (No Starch).

Algorithms was the topic that MacVittie chose when asked for a timeless classic. She cited "Introduction to Algorithms" by Thomas H. Cormen, Charles E. Leiserson, Ronald L. Rivest and Clifford Stein (MIT Press). "This gigantic and very thorough book of algorithms is indispensable in learning and understanding everything from the most basic to the most complex algorithms," she said. "I love the discussions on performance relating to the algorithms because I hate slow code. The fact that the algorithms are language-agnostic makes them applicable for developers regardless of their preferred language."

Barber, meanwhile, talked about a newer book he thinks will have a lasting effect on developers: "Lessons Learned in Software Testing" by Cem Kaner,

James Bach and Bret Pettichord (Wiley). He praised the book's strong style, and said the book presents only realistic solutions and real-world answers to problems. "You simply cannot read this book and walk away believing that it's fair to assume that you know the solution to a problem or a challenge without first learning the details surrounding the problem or challenge," Barber said.

Go Pro's Goldsmith said that one book he considers to be a classic is "Rapid Development" by Steve McConnell (Microsoft Press), which offers rapid software development strategies in addition to mistakes to avoid for rapid development projects. WebMethods' Matsumura added that one of his all-time classic books is "Design Patterns: Elements of Reusable Object-Oriented Software" by Erich Gamma, Richard Helm, Ralph Johnson and John Vlissides (Addison-Wesley). The book offers solutions to design problems through describing patterns for managing object creation, composing objects into larger structures, and coordinating control flow between objects.


## THE HOT NEWBIES

Coffee said that a new book he read recently—"Code and Other Laws of Cyberspace" by Lawrence Lessig (Basic

Books)—offers a valid argument for guiding the still-developing regulatory process of the Internet, calling for a way to regulate the Internet that pleases both government and business. Coffee also cited William Gibson's "Pattern Recognition" (Putnam). Gibson's futuristic tales and sci-fi style offer an exciting perspective on modern consumerism, he said.


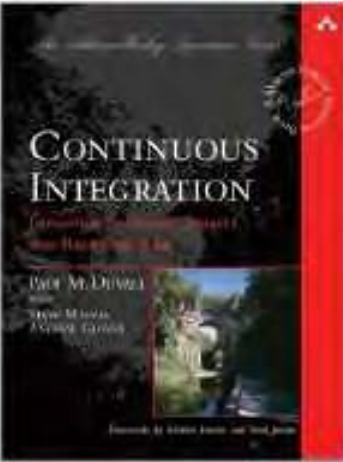


"The 'unevenly distributed future' of Gibson's 'Neuromancer' is still quite far away, but the world of 'Pattern Recognition,' with its massive disruptions of conventional models of markets and media, is where some of us are living now, and where all of us will be living quite soon," Coffee said.

Duntemann noted one particular book fresh off the shelf because of the help it offered while he was experimenting with the PHP programming language recently. "PHP Phrasebook" by Christian Wenz (Sams) serves as a guide to PHP phrases frequently used by PHP developers. "I have a bias against software books that are too new; it usually indicates undue creation. But this one, which presents short code snippets that illustrate PHP language features, helped me greatly," he said. "I don't know if the technique could be applied to more



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# Pleasure, Education

complex languages like C# or Delphi, but it certainly works for the scripters.”

Hunt said he thinks Nassim Nicholas Taleb's “The Black Swan: The Impact of the Highly Improbable” (Random House) is a new book worth reading for its examination of improbable and unpredictable events that have massive impact. The idea of bracing for unforeseen events is something that could help software developers. “This book proves

the old adage that despite the best laid plans, shifts happen,” Hunt said.

Pacific Data Works' Binstock had a number of can't-miss new books to talk about. Among those are the automated testing guide “xUnit Test Patterns: Refactoring Test Code” by Gerard Meszaros (Addison-Wesley); the integration help tool “Continuous Integration: Improving Software Quality and Reducing Risk” by Paul M. Duvall, Steve Matyas and Andrew

Glover (Addison-Wesley); and the Groovy tutorial “Groovy in Action” by Dierk König, Andrew Glover, Paul King, Guillaume Laforge and Jon Skeet (Manning).

MacVittie said she enjoyed “I Am a Strange Loop” by Douglas Hofstadter (Basic Books), which examines the concept of a strange loop that the author developed. A strange loop arises when one finds oneself back where one started, involving either self-reference or paradox.

When asked about a satisfying new book that he has read recently, Barber immediately mentioned “Beautiful Evidence” by Edward R. Tufte (Graphics).

Barber called the book a “masterpiece in graphical presentation of complex data,” saying that the book will change how data presenters and designers sense, interpret and display data.

He said he first came across Tufte at a one-day seminar that the author held nearly a decade ago, and was in awe of what he didn't know about sharing information. “It turned out to be the single day with the most profound impact on my career to date,” Barber said. “This book is simply the latest evolution in what should be required learning for anyone who deals with data.” ■

## RECOMMENDED READING

### Scott Barber

Performance testing specialist and CTO of PerfTestPlus

- ☺ “Blink: The Power of Thinking Without Thinking” by Malcolm Gladwell (Little, Brown and Company)
- 👤 “An Introduction to General Systems Thinking” by Gerald M. Weinberg (Dorset House)
- 🕒 “Lessons Learned in Software Testing” by Cem Kaner, James Bach and Bret Pettichord (Wiley)
- 🔥 “Beautiful Evidence” by Edward R. Tufte (Graphics)

### Andrew Binstock

Principal analyst at Pacific Data Works and columnist for SD Times

- 🕒 “Refactoring: Improving the Design of Existing Code” by Martin Fowler, Kent Beck, John Brant, William Opdyke and Don Roberts (Addison-Wesley)
- 🔥 “xUnit Test Patterns: Refactoring Test Code” by Gerard Meszaros (Addison-Wesley)

### Peter Coffee

Director of platform research at Salesforce.com and former technology editor of eWeek

- ☺ “Dreaming in Code” by Scott Rosenberg (Crown)
- 👤 “The Systems Bible: The Beginner's Guide to Systems Large and Small” by John Gall (General Systemantics/Liberty)
- 🕒 “The UNIX-Haters Handbook” by Simson Garfinkel, Daniel Weise and Steven Strassmann (Wiley)
- 🔥 “Code and Other Laws of Cyberspace” by Lawrence Lessig (Basic Books)

### Jeff Duntemann

Writer

- ☺ “The Wiki Way” by Bo Leuf and Ward Cunningham (Addison-Wesley)
- 👤 “Developing Rich Clients with Macromedia Flex” by Steven Webster and Alistair McLeod (Macromedia)

- 🕒 “Applied Cryptography” by Bruce Schneier (Wiley)
- 🔥 “PHP Phrasebook” by Christian Wenz (Sams)

### Robin Goldsmith

President of training provider Go Pro Management

- 👤 “Test Process Improvement” by Tim Koomen and Martin Pol (Addison-Wesley)
- 🕒 “Rapid Development” by Steve McConnell (Microsoft Press)

### Andrew Hunt

Co-author of “The Pragmatic Programmer”

- ☺ “The 4-Hour Workweek” by Timothy Ferriss (Crown)
- 👤 “Programming Erlang: Software for a Concurrent World” by Joe Armstrong (Pragmatic Bookshelf)
- 🔥 “The Black Swan: The Impact of the Highly Improbable” by Nassim Nicholas Taleb (Random House)

### Lori MacVittie

Solution engineer for application services for F5 Networks

- 👤 “XSLT & XPath: A Guide to XML Transformations” by John Robert Gardner and Zarella L. Rendon (Prentice Hall)
- 🕒 “Introduction to Algorithms” by Thomas H. Cormen, Charles E. Leiserson, Ronald L. Rivest and Clifford Stein (MIT Press)
- 🔥 “I Am a Strange Loop” by Douglas Hofstadter (Basic Books)

### Miko Matsumura

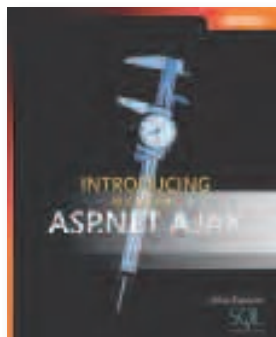
Vice president of SOA products for WebMethods and technology adviser

- ☺ “The Technology Garden: Cultivating Sustainable IT-Business Alignment” by Jon Collins, Neil Macehiter, Dale Vile and Neil Ward-Dutton (Wiley)
- 🕒 “Design Patterns: Elements of Reusable Object-Oriented Software” by Erich Gamma, Richard Helm, Ralph Johnson and John Vlissides (Addison-Wesley)

KEY: ☺ Something read recently that was edifying 👤 Recommendation to a colleague 🕒 Timeless classic 🔥 Hot new book

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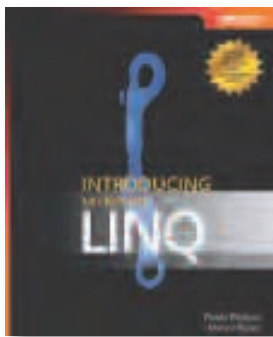
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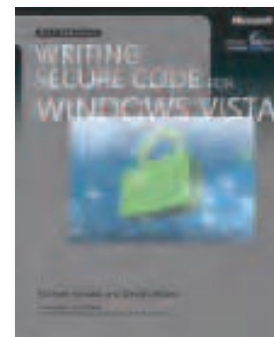
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## FROM THE EDITORS

## Game Almost Over for SCO

After four years in the wilderness of uncertainty, the Linux community found itself in a full-on champagne-and-caviar celebration in mid-August. Judge Dale Kimball issued a summary judgment in The SCO Group v. Novell case, which sought to establish precisely who owned Unix. The results were heavily in favor of Novell, and this undermined SCO's right to sue IBM, DaimlerChrysler and AutoZone. Indeed, Judge Kimball's ruling gave Novell the authority to order SCO to drop the lawsuits.

But before Tux, the Linux penguin, begins to dance on the figurative grave of SCO CEO Darl McBride, it should be noted that the American legal system provides faculties that could drag this monster of a case out even further: While this does look like the final nail in the coffin, Vegas is already placing odds on how many appeals will surface.

Does it matter? Almost certainly not. For most practical purposes, one can assume that the case is finished in all but name. Linux advocates and commercial interests alike have been slowly picking away at the SCO case for years now, and this ruling validates everything they've said and done.

From secret e-mails to stolen source code evaluations, SCO has ignited a fury seldom rivaled in nerdish societies. With nightly attacks on its Web servers and daily hate mail in its inboxes, the company in just five short years has gone from Unix champion to Linux punching bag. It's a real shame that the company we all once loved and appreciated had to end up being the industry's equivalent of that surly guy who comes to your party, drinks all the beer and drunkenly hits on your wife.

And yet, perhaps there's some good that will come of all these massive legal fees. With SCO's impending failure, and the corresponding realization that the company never had any legitimate tricks up its sleeve to begin with, the Linux community is experiencing something of a summer of love. While the original amorous summer, in 1967, was dotted with free face paint, free flowers and free herpes, this current summer of love is all about free compilers, free operating systems and freedom from litigation. The monster under the bridge may not be entirely dead yet, but all the freedom-loving Linux users can now safely gather on top of the bridge and have a group hug.

Let's all hope that someone comes along and puts a monetary bullet in SCO's head. With SCO's market cap at around US\$8.3 million as of this writing, Novell should buy out the ailing company, and put this whole sordid mess to rest once and for all. ■

## When Pigs Fly

It's true that pigs can grow wings. We give Microsoft kudos for its support of the Mono Moonlight project to port Silverlight to Linux, and to Novell's Mono Project for not insisting that a crowbar separation be kept between its open source development and its greatest perceived foe.

No less an authority than Scott Guthrie, Microsoft's developers' guru, reached out to Miguel de Icaza, vice president of developer platforms for Novell and leader of the Mono project, to provide technical guidance to the project. Guthrie's recommendations were taken to heart.

Microsoft's good faith continues. There is an ongoing dialog to this day, and it is bidirectional. Redmond is getting the project the "right people" inside and outside of Microsoft; the Moonlight team is contributing its suggestions for the Silverlight platform.

You may be surprised to hear that Mono is using IronPython and IronRuby, Microsoft's shared-source implementation of the Python and Ruby programming languages.

The jury is still out on whether this thaw in relations between Microsoft and open source proponents will last, and many suspect that Microsoft has ulterior motives. Perhaps Redmond is planning some mischief. But what we see is positive, very positive.

The only thing that does not scan well is why Microsoft is not building its own Linux implementation of Silverlight, sharing a common codebase with the Windows and Mac versions. But that might be too much for Team Gates to stomach. ■

## LETTERS TO THE EDITOR

## Students Earn Credit For Javiator Contribution

I am delighted to see our collaboration with IBM Research published at such a prominent place in SD Times ["IBM Research Makes Real-Time Fly," July 15, page 3]. However, I am concerned about my students' motivation and spirit since there is no credit given to our contribution, which, I feel, is significant: The Javiator project is a research project at the Department of Computer Sciences at the University of Salzburg in Austria: javiator.cs.uni-salzburg.at.

The model helicopter called Javiator has been designed and built by a student of mine, Rainer Trummer. He is proud to have designed probably one of the best high-performance quad-rotors available. The flight control software has also been designed by my students.

IBM Research has contributed the Java runtime infrastructure, which we helped to improve, both conceptually and by contributing code. Nevertheless, we use the helicopter not only in our collaboration with IBM Research but also for other scientific purposes.

Rainer Trummer and Harald Röck are two of my Ph.D. students. I am a full professor at the University of Salzburg. David Bacon and Joshua Auerbach are IBM staff researchers. (See photos below.)

**Christoph Kirsch**

Department of Computer Sciences  
University of Salzburg, Austria

## EXCITED ABOUT COLD FUSION

Great to see your acknowledgement of the release of ColdFusion 8 ["ColdFusion Heats Up," June 15, page 1]. I've worked with a lot of different development environments over the years, including .NET and Java, and I have to admit I'm as excited about CF8 as I've ever been about a software release.

I work at a midsized bank, and though I still often use .NET, ColdFusion is bread-and-butter around here, at least in terms of Web development. My boss loves it because he knows when I undertake a project in ColdFusion, the finished product is going to be reliable, high-performance and done on time.

Who am I to argue with my boss?

To paraphrase one of the greats, ColdFusion's been good to me.

**Paul Brown**

Web Developer  
AMCORE Bank  
Rockford, Ill.

## WHAT DO YOU THINK?

SD Times welcomes feedback. Letters should include the writer's name, company affiliation and contact information. Letters become the property of BZ Media and may be edited for space and style. Send your thoughts to [feedback@bzmedia.com](mailto:feedback@bzmedia.com).



The Javiator helicopter, above, was designed and built by University of Salzburg student Rainer Trummer, at left in bottom photo. With him, from left, are IBM researchers Joshua Auerbach and David Bacon, University of Salzburg student Harald Röck and Professor Christoph Kirsch.

# Greener Pastures for Development

Anyone who's been alive and functioning these past 12 months knows that green is the new pink. The world over, vendors and consumers are beginning to educate themselves about what they can do to be friendlier to the environment.

In the realm of computing, the core issues are generally defined in terms of

## Integration Watch



Andrew Binstock

hardware. And they are: power consumption (which includes the power considerations for cooling hardware), space, disposal and regulatory compliance. Space might seem surprising in this context, but it refers to the great cost—both financial and ecological—of building new data centers or expanding existing sites. The upshot of these multiple concerns is that IT's goal is to use fewer, smaller, leaner systems. Anything that moves toward that goal is good; everything else is not so good.

In practical terms, the most significant progress has occurred at the hardware levels. Multicore processors are a response to power consumption, as I have explained in previous columns. However, it is the processor power-saving that preceded multicores that is suddenly the focus of new interest. That's the technology that became widely available in the Pentium M chip, which was the processor at the heart of the Intel Centrino platform for several years. This processor introduced an important power-saving design (at the time, the goal was not green at all, but rather extending battery life on notebooks and portable computers): It could turn off various parts of the chip when they were not in use. So, for example, when the processor was idling, banks of transistors in the chip cache were turned off. And

even when the chip was actively in use, small areas that were intermittently used could be turned off and on very quickly, so that between certain actions a few transistors could be taken off the power grid. The accumulated benefit of these savings was substantial. Centrino-based notebooks were the first full-sized notebooks to consistently deliver three hours of work from a single charge.

Although no one particularly focused on it at the time, the design of software could enhance or substantially undercut the Centrino's energy savings. The key was to avoid activities that kept the processor churning needlessly. For example, a horrendous practice of this kind is using spin-locks. For readers who have not yet segued into multithreaded processing, a spin-lock is a way of synchronizing two threads. One thread repeatedly runs (or spins) a very tight loop that constantly reads a variable, waiting for it to change. The unceasing looping and reading keeps the processor constantly working, when in fact what it should be doing is simply waiting (with various parts sleeping).

The concept of constant checking is not limited to spin-locks and multithreaded apps. In other applications, we find significant examples of waste caused by unnecessary actions that prevent the processor from shifting into a low-power mode. The most common of these is a kind of watchdog timer or keep-awake service that generates interrupts on a frequent basis. This feature is found in many operating systems. Recently, Intel released a tool that helps identify the source of these interrupts on Linux-based systems. The tool, called PowerTOP (www.linuxpowertop.org),

shows which processes are generating the most system wake-up interrupts. The site also contains tips on fixing the guilty processes.

These interrupts are surprisingly common: IM software, for example, that checks your status every five seconds so as to update your "away" tag; NTP time synchronization utilities; DHCP daemons and so forth. Mac OS likewise has numerous entries for applets and applications that keep the system unnecessarily awake.

Constant polling is not the only culprit. Sometimes, it's applications that are doing useless work—for example, a browser that is displaying a repeating animation. Even if you're in a different window, the silly GIF image is being constantly re-rendered and the CPU is staying busy doing it.

An interesting aspect of this emerging consciousness of wasting energy is that it will have a discernible effect on programming. Developers will no longer be able to poll whenever they want, but instead will have to decide what is the minimum level of activity they can manage. Already, the PowerTOP Web site describes many of the frequent wake-up calls in applications as bugs, even though there is no implication that the program is working incorrectly—inefficiently, perhaps, but not incorrectly.

As data centers struggle to keep power costs down and space requirements contained, the pressure will flow upstream to developers, who will start having to explain why their programs are using so many resources. Smart developers will start thinking about this new-found need for efficiency now. ■

Andrew Binstock is the principal analyst at Pacific Data Works. Read his blog at [binstock.blogspot.com](http://binstock.blogspot.com).



Software Development Times  
Issue No. 181  
September 1, 2007

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## Modernizing Applications Might Not Bring Desired Results

New research from Aberdeen Group finds that organizations are likely to select their application modernization strategies based on one of two underlying drivers. According to the report "Modernizing Legacy Applications: Maximizing the Investment," organizations that are driven by cost concerns tend to choose the "rehosting" method, where applications are preserved and moved onto updated hardware. On the other hand, organizations that cherish agility are more likely to extend their applications, as part of the implementation of SOA middleware or Web services.

But the report also notes that going the rehosting route for no other reason than cost might not deliver the expected results. Only 19 percent of survey respondents saw project costs drop, although infrastructure capital costs did shrink in 42 percent of cases.

## To Rehost or Extend?

### REHOST:



### EXTEND:



Percent of Respondents

Source: Aberdeen Group



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# Fun With Compilers...Really

I used to think that writing a compiler was the most fun you could have programming. I now amend that. Writing a unit-tested compiler is the most fun you can have programming.

Compilers and translators are not very commonly required to solve business needs, but not every data-source produces library-parsable XML, and the tools needed to transform structured-but-untagged data are the same ones that are used to emit code. And while the topic of parsing text is deep enough to warrant thick books, the types of input that a business developer is likely to face are usually easily tackled with modern tools. When a translation or code-generation problem arises in discussion, your pulse should quicken from excitement rather than fear.

I think the best modern tool for parsing is ANTLR ([www.antlr.org](http://www.antlr.org)), recently updated to a long-awaited third version. ANTLR is a long-term project from the University of San Francisco's Terence Parr and can handle most any grammar thrown at it (technically, it generates arbitrarily deep LL look-aheads and memorizes them for performance in a packrat-like manner). ANTLR has a fantastic IDE called ANTLRWorks (developed primarily by Jean Bovet) and a text-generation library called StringTemplate.

Each component has a learning curve, and the overall system is complex enough that even the most bold would be wise to work their way through the time-honored four-function calculator example. This "Hello, World" of parsing is used in Parr's new book "The Definitive ANTLR Reference," published by The Pragmatic Programmers, and unequivocally necessary as a supplement to the ANTLR documentation and wiki.

Although I've used ANTLR in the past, only with the new release have I used it to tackle a production problem—handling a quite complex mainframe output with decades of accreted special-case quirks and codes. As is not uncommon, my clients felt locked in to a supplier who charged them tens of thousands in annual license fees, confident that no one would breach the barrier to entry of parsing the mainframe data. When client discussions involve people saying things like "If you look at line 429,327, you'll see an example of the problem," such confidence might have been justified in the past.

If you haven't written a compiler in the managed era, you probably think of such development as something akin to

rebuilding an engine: You work blindly for long stretches when things won't even start. It's only fairly late in the process when you experience the joyous emergent characteristic of a program blossoming into functionality. With ANTLR and a unit-testing framework, there is no period without feedback: you can unit-test both your front-end analysis and your back-end generation from the bottom up, snapping them together as you go and relying on your lower-level tests to catch any mistakes. While you may forgo the Frankensteinian elation of a parser coming to life after endless error messages, when you put a "+" at the end of a grammar rule and chew through a multimegabyte input on the first run, you may experience sudden head-swelling.

Unit-testing a compiler under construction will, however, expose you to the most frustrating aspect of unit-testing: scaffold shattering. Testing suites are filled with mock objects and data structures manually stitched together; no matter how trivial, a systemic change to the data structures will often break dozens of tests. Those not convinced of the long-term

benefits of unit-testing (surprisingly, such skeptics still exist) will be tempted to abandon the suite or comment out large swatches of tests ("Of course the child-node count is 12"). The punctilious will be tempted to refactor the suite toward meta-testing ("Gee, I could generate the construction of mock objects..."). I don't like test suites refactored toward abstraction; one of the primary purposes of a test suite is as an aid to comprehending the system under test, and I think it's important that tests take as straight a path as possible between instantiation and system test. Personally, I would rather pay the price of an occasional multihour fixup during development than the price of a difficult-to-understand suite in 18 months.

ANTLR and ANTLRWorks are themselves Java applications, but code generation is abstracted with the StringTemplate library, and lexers and parsers can be generated in a large number of target languages. Unfortunately, at the moment C#, Python and Ruby code generation lag behind Java; none is yet up to snuff when generating the tree parsers necessary for real language implementation. So the use of ANTLR to write a compiler for the Dynamic Language Runtime is probably a few months away. I wonder who will be the first to try? ■

Larry O'Brien is a technology consultant, analyst and writer. Read his blog at [www.knowing.net](http://www.knowing.net).

## Windows & .NET Watch



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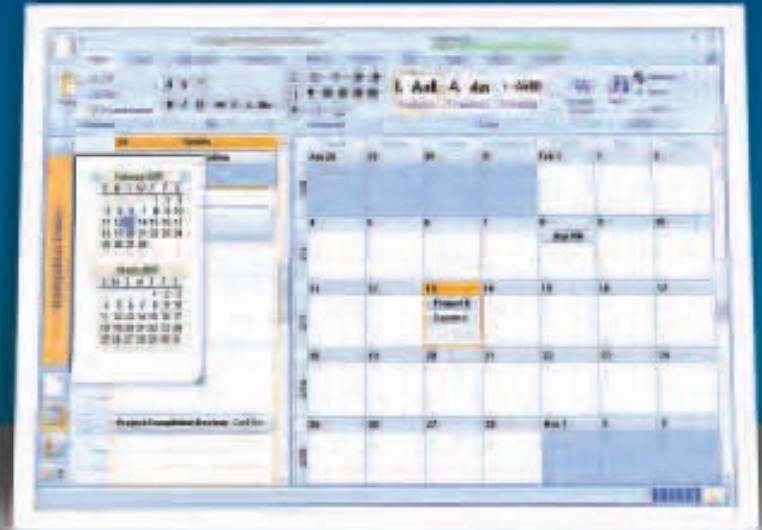
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# Challenges of Testing Services

When considering SOA testing, you need to take into account that the services are distributed within the enterprise, and sometimes outside of the enterprise. This distribution of services comes with its own set of challenges, including the need to discover the services under test in heterogeneous environments. Moreover, the actual runtime testing of each service is complex unto itself.

Keeping all that in mind, there are a few things you should think about when considering SOA and services testing. These things should be built into your approach, and leveraged by your testing tools of choice.

Testing of the data as it flows through a service is almost identical to testing a traditional application—monitoring points are leveraged to watch the data as it flows through. Also, consider the information the service consumes, as well as the information it produces. You can approach testing services at the data levels through white-box or black-box testing, depending on your need to deeply validate the service's ability to process data. There are tools on the market that can assist you with this, such as MindReef's SOAPScope.

When considering service testing, we also need to focus on the behavior, or the functionality, of the service. This means

that the logic of the service is monitored and determined to be sound, and that the information flowing into the service is processed correctly as to the design of the service. Moreover, if the service is designed to provide different behavior via context, that needs to be monitored throughout the processing of the service as well. Same approach: Set up monitoring points, and watch the behavior through execution.

Many who test SOAs like to mix the behavior and data testing procedures and tools together. I find it's useful to separate the testing scenarios, both data and behavior, before testing them together holistically, either through system or regression testing. This allows you to better diagnose issues with one aspect of the service or another.

Service integrity is the degree to which the service is able to deliver consistent value over a long period of time. In other words, this is the ability for the service to deliver function to the consumers that call it. Thus, testing for service integrity is critical to the overall testing of the SOA, and you need to set up a tools or a testing system that's able to test the service long-term, using various consumers to exercise

the service to determine its ability to live up to service integrity thresholds.

Testing for service design means understanding the functionality of the service, and the design patterns used, and the ability for that service to live up to that particular design. The idea of service design testing is to understand the overall design of the service, and thus how the

services exist in support of those patterns. In many instances you'll find that the service design falls short in terms of its ability to live up to the vision set forth by the service designer (if there is one). While many don't consider checking service design to be a part of testing a SOA, I think it's critical that somebody check it before the service goes into production.

Service-level agreements (SLA) are contracts that exist internally or externally and consider the consistent performance of a service. The idea is to create an agreement that ensures that a service will provide a specific level of performance, and then measure the performance of the service to the agreement. This is an important component of testing since services that don't live up to

SLAs will hinder the overall performance and functionality of the SOA.

In consideration of policy when approaching testing, you need to consider how the defined policies (best practices) are enforced within the context of service operations and the SOA in general. Service policies are created to ensure that access to services is limited to particular consumers, best practices are employed, standards are followed, and the way they consume the service is limited to set policies. Thus, testing for compliance to policy is critical in determining the overall value of policies, and how they are functioning at runtime.

Finally, it's important to note that a SOA is an architecture, thus you need to test the architecture holistically, including how the overall architecture is living up to core objectives such as reuse and agility. Testers typically don't like to address holistic issues such as architecture, but considering that SOA is many things working together to form a business solution, you can't help but address it at the testing phase. Typically, this is system or regression testing to figure out the value of the architecture and if it's working properly, but sometimes a good old-fashioned logical look at what the heck it's doing will suffice. ■

David S. Linthicum is the CEO of the Linthicum Group. Reach him at [david@linthicumgroup.com](mailto:david@linthicumgroup.com).

## SOA Watch



David S. Linthicum

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# The Relevance of ITIL

The Information Technology Infrastructure Library—ITIL for short—is a set of best practices and processes for supporting a business through IT operations.

At first read, the ITIL documents don't seem to have anything to do with application development. Even Brian Johnson, CA's worldwide ITIL practice manager, admits ITIL is not about application development, although he does say it touches on it. ITIL, for the uninitiated, involves a rigorous set of qualifying exams to bring individuals up to a level of competency (there are four levels, actually) in IT management.

There's no source code, no application framework: ITIL is a series of books that recognize that IT is a key facilitator of business and offers strategic possibilities for competitiveness and growth. According to the official ITIL Web site, "The ethos behind the development of ITIL is the recognition that [organizations] are becoming increasingly dependent on IT in order to satisfy their corporate aims and meet their business needs. This leads to an increased requirement for high quality IT services."

Johnson would be in a position to know, having been part of the team that created ITIL for the U.K.'s Central Computer and Telecom Agency, now part of the Office of Government Commerce. "There were problems with the first book. It was written in the context of operations," Johnson said. "We prob-

ably missed a few things."

Now, with the release of version 3 the first week of June, Johnson's back beating the ITIL drum and saying it's important to convince people in development that there's a home for IT processes there. "If developers and operations people are discussing things like capacity during development, they won't release applications that fail over the second they go live," he said.

The problem with the infrastructure world, according to Johnson, is that "it's a small gene pool, and it needs chlorine once in a while." People working on new sets of features should be working with infrastructure managers and project managers to make sure the application won't negatively affect the system when it is operational.

ITIL, Johnson noted, brings project and portfolio management together into a bigger picture. "An IT service portfolio is a subset of the business portfolio," he said. "Otherwise, it's the tail wagging the dog."

The key to making this all work, he claimed, is communication. Sounds simple enough. "If a developer is from the old school, creating a feasibility study first, he should reach out to the ITIL manager and assess the impact of the application on the IT system. Storage and availability issues will affect business continuity," he said, adding that these are issues to be considered during development.

## Industry Watch



David Rubinstein

Storage a development concern? Capacity? To paraphrase Joe Pesci from the classic film comedy "My Cousin Vinny," let's see...How much more (stuff) can we possibly pile on top of the outcome of this development project? Developers are being told that application security is their responsibility. Now, Johnson is saying they should consider such things as performance, availability and even storage. While it's becoming recognized that the earlier things like governance and security can be built into the life cycle the better it is all around, when did the act of writing great code become not good enough? How much more can we ask of developers and still hope to get projects out the door on time and under budget?

Enter the project manager. ITIL, Johnson said, needs to be put on that level, where an overview of the entire life cycle can be had. One of the flaws Johnson noted with the earlier ITIL book was that when a request for change came up through the ITIL area, it also bubbled up to development. That, he said, could subvert the project management system. "There needs to be oversight from the project office," he said.

And frankly, that's where it belongs. For as important as ITIL is proving itself to be to the IT staff, and to the business people tasked with getting the systems to work for the business, it's not something that rank-and-file developers should need to concern themselves with.

Let the project manager run interference with the other departments so that ITIL touches development, but not the developers. ■

*David Rubinstein is editor-in-chief of SD Times.*

## BUSINESS BRIEFS

Two Australian-based development tool companies have come together, as defect-tracking and continuous integration software provider **Atlassian Software Systems** on Aug. 1 acquired **Cenqua**, which sells SCM software. Financial terms of the deal were not disclosed. Atlassian will add Cenqua's FishEye code repository viewer, Crucible change management software and Clover code coverage analysis tool to its lineup. The three will remain separate products; Clover.NET will be discontinued but customers will get support for another year, the company said in a news release. Atlassian's other products include JIRA defect-tracking software, the Bamboo automated build tracker, Confluence collaboration software, and Crowd, which will allow for single sign-on for all the products. . . . Business process management software provider **Metastorm** has acquired **Proforma Corp.**, which sells modeling solutions for enterprise architecture and business process analysis. With the combined product line, Metastorm will be able to deliver a software platform that ties together architecture, business strategy, and process planning, development and execution. No financial terms were given. The Metastorm Enterprise software portfolio now comprises Metastorm ProVisionEA, which the company said allows customers to create models that describe enterprise assets and relationships; Metastorm ProVisionBPA, which allows architects and business people to

document, analyze and streamline complex processes; and Metastorm BPM, for design, automation, analysis and monitoring of an organization's processes—both human and system-centric. . . . Open source business intelligence producer **JasperSoft** has raised US\$12 million in fourth-round funding, led by **Scale Venture Partners** with **SAP Ventures**. Scale's Rory O'Driscoll has joined the board of directors. JasperSoft recently shipped its Business Intelligence Suite 2.0 with an expanded set of supported applications servers, databases and operating systems.

**EARNINGS: CA** reported first-quarter fiscal 2008 revenue of US\$1.02 billion, which represents an 8 percent increase over the prior year's first quarter. GAAP income from the quarter's continuing operations was \$129 million, or 24 cents per share, compared with \$35 million, or 6 cents per share, for the same period a year ago. In the quarter, CA—formerly known as Computer Associates—repurchased 16.9 million common shares, or about 3 percent of all outstanding shares. Also in the quarter, the company named William McCracken chairman of the board of directors. . . . Magic Software reported second fiscal quarter 2007 revenue of US\$16.8 million, an 11 percent increase over the same period in 2006, the company reported. Net income was \$800,000. ■

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